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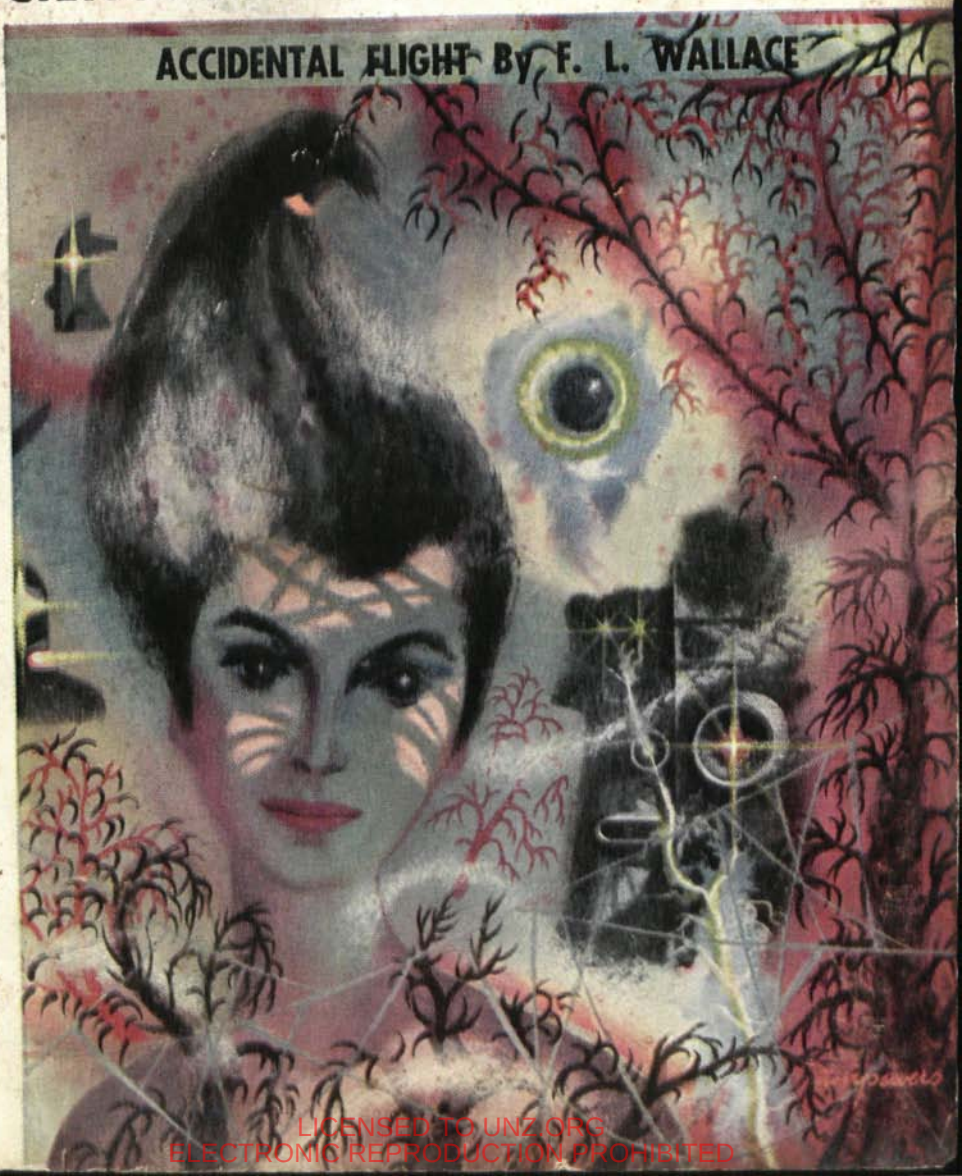
ACCIDENTAL FLIGHT By F. L. WALLACE



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Homeless Facts

IN the introduction to the GALAXY *Science Fiction* Reader, I made a point that I think can use more exploration.

That was the accidental landing of *Penicillium notatum* in a germ culture in 1929, the observation that it left a circle of dead bacteria around it . . . and no follow-up to learn why!

Had a writer of that paleolithic era of science fiction come across the item, he doubtless would have had a noble collegiate, a pure flapper and a wicked cartel for suspense, the compulsory eating of moldy bread, all disease wiped out, and everyone immortal as a result. The story, I remarked, would have been a literary goulash, but it might have interested some biochemist in pushing the experiment . . . *and we might have had penicillin 15 years before we actually did!*

Even more, the lines of research that penicillin opened up would have been advanced by 15 years, which, judging by the progress of the last decade, is enough to establish a whole new pharmacology. Lord knows what we might have had by now if that story had actually been written at that time.

It's a saddening thought, for everyone has relatives and friends whose lives could have been saved by antibiotics.

If you really want to be depressed, though, just consider the number of similar observations that *cannot* be reported. The case of the Flying Saucers happens to be the most dramatic one at the moment. Whatever the Navy may say, not all instances can be explained as Skyhook balloons or the planet Venus; too many of those who have seen the phenomena would have recognized either. There is a good chance that the mystery could be solved . . . if these reliable witnesses could report their findings without fear of ridicule or dismissal.

Nobody can guess at the amount of data we are being deprived of for those two reasons, plus one more that I will come to later. It must be truly enormous. Even if it consisted of only one item a year, like that of *Penicillium notatum,* we still would be poorer for not knowing.

Meteorites are an encouraging example of a problem that was solved. *Less than 150 years ago, there were no meteorites at all.* Stars fell through the sky, of course, and hot stones were discovered lying on the ground. But the falling stars were regarded as literally that; the hot stones

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were assumed to be debris from a distant volcano. Science had simply not advanced far enough to explain them as bits of interplanetary rock that had been heated to incandescence by air friction.

For all our superior knowledge, there still are huge gaps to be filled, more than enough to keep us from smiling smugly at the ignorance of our ancestors. We know about meteorites, but do we know about sea serpents?

Naturally, sea serpents don't exist. *Or is it the reliable reports of them that do not exist?* Willy Ley has recorded many cases of trained observers, unwise enough to announce having seen them, who suffered lifelong jeers. The lesson was sharp enough to keep others from repeating the error. Yet so many other rumored flora and fauna were, later authenticated that the lesson is clearly a false one.

Besides ridicule and dismissal, I mentioned a third reason for guarded silence: the lack of a legitimate place to which to report phenomena that cannot be explained *at present*.

Science, unfortunately, has abandoned this function to the followers of Charles Fort. I do not intend to discredit the Fortean Society, but the Society, with its hostility toward science, is not the place I had in mind.

What is urgently needed, and has been for a long time, is a scientific bureau, journal, agency —anything at all that has contact with researchers who can rely on it both for objectivity and available data.

GALAXY is not the ideal medium for such information; no science fiction magazine could be. Its space *must* be devoted primarily to stories, and will be.

But in the absence of any other, GALAXY offers whatever facilities it has. Reports can be turned over to Willy Ley for possible inclusion or condensation in his monthly department, with the assurance that he can tell authentic reports from phonies. Where further correspondence is required, he will, of course, dig for more information.

The name and address of the observer must accompany the report; both will be withheld on request.

We do not delude ourselves that GALAXY can accomplish the job as well as a trained and staffed scientific agency. But the least we can do is try to serve until one comes along. When it does, you may be sure that we will step aside . . . and gratefully, first because we are not well enough equipped, and second because it will be glad news. And high time, too!

—H. L. GOLD

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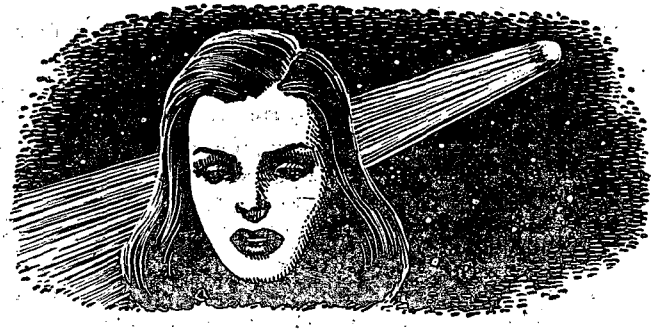

Accidental Flight

Outcasts of a society of physically perfect people, they couldn't stay and they couldn't go home again — yet there had to be some escape for them. Oddly enough, there was!

By F. L. WALLACE

CAMERON frowned intently at the top of the desk. It was difficult to concentrate under the circumstances. "Your request was turned over to the Medicouncil," he said. "After studying it, they reported back to the Solar Committee."

Docchi edged forward, his face literally lighting up.

Dr. Cameron kept his eyes averted; the man was damnably disconcerting. "You know what the answer is. A flat no, for the present."

Docchi leaned back. "We

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should have expected that," he said wearily.

"It's not entirely hopeless. Decisions like this can always be changed."

"Sure," said Docchi. "We've got centuries." His face was flushed—*blazing* would be a better description.

Absently, Cameron lowered the lights in the room as much as he could. It was still uncomfortably bright. Docchi was a nuisance.

"But why?" asked Docchi. "You know that we're capable. Why did they refuse?"

Cameron had tried to avoid that question. Now it had to be answered with blunt brutality. "Did you think you would be chosen? Or Nona, or Jordan, or Anti?"

Docchi winced. "Maybe not. But we've told you that we're willing to abide by what the experts say. Surely from a thousand of us they can select one qualified crew."

"Perhaps so," said Cameron. He switched on the lights and resumed staring at the top of the desk. "Most of you are biocompensators. Ninety per cent, I believe. I concede that we ought to be able to get together a competent crew." He sighed. "But you're wasting your time discussing this with me. I'm not responsible for the decision. I can't do anything about it."

Docchi stood up. His face was colorless and bright.

Dr. Cameron looked at him directly for the first time. "I suggest you calm down. Be patient and wait; you may get your chance."

"You wait," said Docchi. "We don't intend to."

The door opened for him and closed behind him.

Cameron concentrated on the desk. Actually he was trying to look through it. He wrote down the card sequence he expected to find. He opened a drawer and gazed at the contents, then grimaced in disappointment. No matter how many times he tried, he never got better than strictly average results. Maybe there was something to telepathy, but he hadn't found it yet.

He dismissed it from his mind. It was a private game, a method of avoiding involvement while Docchi was present. But Docchi was gone now, and he had better come up with some answers. The right ones.

He switched on the telecom. "Get me Medicouncilor Thorton," he told the robot operator. "Direct, if you can; indirect if you have to. I'll wait."

With an approximate mean diameter of thirty miles, the asteroid was listed on the charts as Handicap Haven. The regular inhabitants were willing to admit

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the handicap part of the name, but they didn't call it haven. There were other terms, none of them suggesting sanctuary.

It was a hospital, of course, but even more like a convalescent home, *the permanent kind.* A healthy and vigorous humanity had built it for those few who were less fortunate. A splendid gesture, but, like many such gestures, the reality fell somewhat short of the original intentions.

The robot operator interrupted his thoughts. "Medicouncilor Thorton will speak to you."

The face of an older man filled the screen. "On my way to the satellites of Jupiter. I'll be in direct range for the next half hour." At such distance, transmission and reception were practically instantaneous. "You wanted to speak to me about the Solar Committee reply?"

"I do. I informed Docchi a few minutes ago."

"How did he react?"

"He didn't like it. As a matter of fact, he was mad all the way through."

"That speaks well for his mental resiliency."

"They all seem to have enough spirit, though, and nothing to use it on," said Dr. Cameron. "I confess I didn't look at him often, in spite of the fact that he was quite presentable. Handsome, even, in a startling way."

Thorton nodded. "Presentable. That means he had arms."

"He did. Is that important?"

"I think it is. He expected a favorable reply and wanted to look his best. As nearly normal as possible."

"Trouble?"

"I don't see how," said the medicouncilor uncertainly. "In any event, not immediately. It will take them some time to get over the shock of refusal. They can't do anything, really. Individually they're helpless. Collectively—there aren't parts for a dozen sound bodies on the asteroid."

"I've looked over the records," said Dr. Cameron. "Not one accidental has ever *liked* being on Handicap Haven, and that covers quite a few years. But there has never been so much open discontent as there is now."

"Someone is organizing them. Find out who and keep a close watch."

"I know who. Docchi, Nona, Anti, and Jordan. But it doesn't do any good merely to watch them. I want your permission to break up that combination. Humanely, of course."

"How do you propose to do it?"

"Docchi, for instance. With prosthetic arms he appears physically normal, except for that uncanny luminescence. That is repulsive to the average person.

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Medically there's nothing we can do about it, but psychologically we might be able to make it into an asset. You're aware that Gland Opera is the most popular program in the Solar System. Telepaths, teleports, pyrotics and so forth are the heroes. All fake, of course: makeup and trick camera shots. But Docchi can be made into a real live star. The death-ray man, say. When his face shines, men fall dead or paralyzed. He'd have a chance to return to normal society under conditions that would be mentally acceptable to him."

"Acceptable to him, perhaps, but not to society," reflected the medicouncilor. "An ingenious idea, one which does credit to your humanitarian outlook. Only it won't work. You have Docchi's medical record, but you probably don't know his complete history. He was an electrochemical engineer, specializing in cold lighting. He seemed on his way to a brilliant career when a particularly messy accident occurred. The details aren't important. He was badly mangled and tossed into a tank of cold lighting fluid by automatic machinery. It was some time before he was discovered.

"There was a spark of life left and we managed to save him. We had to amputate his arms and ribs practically to his spinal column. The problem of regeneration wasn't as easy as it usually is. We were able to build up a new rib case; that's as much as we could do. Under such conditions, prosthetic arms are merely ornaments. They can be fastened to him and they look all right, but he can't use them. He has no back or shoulder muscles to anchor them to.

"And add to that the adaptation his body made while he was in the tank. The basic cold lighting fluid, as you know, is semi-organic. It permeated every tissue in his body. By the time we got him, it was actually a necessary part of his metabolism. A corollary, I suppose, of the fundamental biocompensation theory."

The medicouncilor paused and shook his head. "I'm afraid your idea is out, Dr. Cameron. I don't doubt that he would be successful on the program you mention. But there is more to life on the outside than success. Can you picture the dead silence when he walks into a room of normal people?"

"I see," said Cameron, though he didn't, at least not eye to eye. The medicouncilor was convinced and there was nothing Cameron could do to alter that conviction. "The other one I had in mind was Nona," he added.

"I thought so." Thorton glanced at the solar chronome-

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ter. "I haven't much time, but I'd better explain. You're new to the post and I don't think you've learned yet to evaluate the patients and their problems properly. In a sense, Nona is more impossible than Docchi. He was once a normal person. She never was. Her appearance is satisfactory; perhaps she's quite pretty, though you must remember that you're seeing her under circumstances that may make her seem more attractive than she really is.

"She can't talk or hear. She never will. She doesn't have a larynx, and it wouldn't help if we gave her one. She simply doesn't have the nervous system necessary for speech or hearing. Her brain is definitely not structurally normal. As far as we're concerned, that abnormality is not in the nature of a mutation. It's more like an anomaly. Once cleft palates were frequent—prenatal nutritional deficiencies or traumas. Occasionally we still run into cases like that, but our surgical techniques are always adequate. Not with Nona, however.

"She can't be taught to read or write; we've tried it. We dug out the old Helen Keller techniques and brought them up to date with no results. Apparently her mind doesn't work in a human fashion. We question whether very much of it works at all."

"That might be a starting point," said Cameron. "If her brain—"

"Gland Opera stuff," interrupted Thorton. "Or Rhine Opera, if you'll permit me to coin a term. We've thought of it, but it isn't true. We've tested her for every telepathic quality that the Rhine people list. Again no results. She has no special mental capacities. Just to make sure of that, we've given her periodic checkups. One last year, in fact."

Cameron frowned in frustration. "Then it's your opinion that she's not able to survive in a normal society?"

"That's it," answered the medicouncilor bluntly. "You'll have to face the truth—you can't get rid of any of them."

"With or without their cooperation, I'll manage," said Cameron.

"I'm sure you will." The medicouncilor's manner didn't ooze confidence. "Of course, if you need help we can send reinforcements."

The implication was clear enough. "I'll keep them out of trouble," Cameron promised.

The picture and the voice were fading. "It's up to you. If it turns out to be too difficult, get in touch with the Medicouncil . . ."

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The robot operator broke in: "The ship is beyond direct telecom range. If you wish to continue the conversation, it will have to be relayed through the nearest main station. At present, that is Mars."

Aside from the time element, which was considerable, it wasn't likely that he would get any better answers than he could supply for himself. Cameron shook his head. "We are through, thanks."

He got heavily to his feet. That wasn't a psychological reaction at all. He really *was* heavier. He made a mental note. He would have to investigate.

In a way they were pathetic—the patchwork humans, the half or quarter men and women, the fractional organisms masquerading as people—an illusion which died hard for them. Medicine and surgery were partly to blame. Techniques were too good, or not good enough, depending on the viewpoint.

Too good in that the most horribly injured person, if he were still alive, could be kept alive. Not good enough because a percentage of the injured couldn't be returned to society completely sound and whole. There weren't many like that; but there were some, and all of them were on the asteroid.

They didn't like it. At least they didn't like being *confined* to Handicap Haven. It wasn't that they wanted to go back to the society of the normals, for they realized how conspicuous they'd be among the multitudes of beautiful, healthy people on the planets.

What the accidentals did want was ridiculous. They desired, they hoped, they petitioned to be the first to make the long, hard journey to Alpha and Proxima Centauri in rockets. Trails of glory for those that went; a vicarious share in it for those who couldn't.

Nonsense. The broken people, those without a face they could call their own, those who wore their hearts not on their sleeves, but in a blood-pumping chamber, those either without limbs or organs—or too many. The categories seemed endless.

The accidentals were qualified, true. In fact, of all the billions of solar citizens, *they alone could make the journey and return.* But there were other factors that ruled them out. The first point was never safe to discuss with them, especially if the second had to be explained. It would take a sadistic nature that Cameron didn't possess.

DOCCHI sat beside the pool. It was pleasant enough, a pastoral scene transplanted from Earth. A small tree stretched

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shade overhead. Waves lapped and made gurgling sounds against the sides. No plant life of any kind grew and no fish swam in the liquid. It looked like water, but it wasn't. It was acid. In it floated something that monstrously resembled a woman.

"They turned us down, Anti," Docchi said bitterly.

"Didn't you expect it?" the creature in the pool asked.

"I guess I didn't."

"You don't know the Medicouncil very well."

"Evidently I don't." He stared sullenly at the faintly blue fluid. "Why did they turn us down?"

"Don't you know?"

"All right, I know," he said. "They're pretty irrational."

"Of course, irrational. Let them be that way, as long as we don't follow their example."

"I wish I knew what to do," he said. "Cameron suggested we wait."

"Biocompensation," murmured Anti, stirring restlessly. "They've always said that. Up to now it's always worked."

"What else can we do?" asked Docchi. Angrily he kicked at an anemic tuft of grass. "Draw up another request?"

"Memorandum number ten? Let's not be naive about it. Things get lost so easily in the Medicouncil's filing system."

"Or distorted," grunted Docchi.

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"Maybe we should give the Medicouncil a rest. They're tired of hearing us anyway."

"I see what you mean," said Docchi, rising.

"Better talk to Jordan about it."

"I intend to. I'll need arms."

"Good. I'll see you when you leave for far Centauri."

"Sooner than that, Anti. Much sooner."

Stars were beginning to wink. Twilight brought out shadows and tracery of the structure that supported the transparent dome overhead. Soon controlled slow rotation would bring darkness to this side of the asteroid.

CAMERON leaned back and looked speculatively at the gravital engineer, Vogel. The man could give him considerable assistance, if he would. There was no reason why he shouldn't; but any man who had voluntarily remained on Handicap Haven as long as Vogel had was a doubtful quantity.

"Usually we maintain about half Earth-normal gravity," Cameron said. "Isn't that correct?"

Engineer Vogel nodded.

"It isn't important why those limits were set," Cameron continued. "Perhaps it's easier on the weakened bodies of the accidentals. There may be economic factors."

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"No reason for those limits except the gravital units themselves," Vogel said. "Theoretically it should be easy to get any gravity you want. Practically, though, we get between a quarter and almost full Earth gravity. Now take the fluctuations. The gravital computer is set at fifty per cent. Sometimes we get fifty per cent and sometimes seventy-five. Whatever it is, it just is and we have to be satisfied."

The big engineer shrugged. "I hear the units were designed especially for this asteroid," he went on. "Some fancy medical reason. Easier on the accidentals to have less gravity change, you say. Me, I dunno. I'd guess the designers couldn't help it and the reason was dug up later."

Cameron concealed his irritation. He wanted information, not a heart-to-heart confession. "All practical sciences try to justify whatever they can't escape but would like to. Medicine, I'm sure, is no exception." He paused thoughtfully. "Now, there are three separate gravital units on the asteroid. One runs for forty-five minutes while the other two are idle. Then it cuts off and another takes over. This is supposed to be synchronized. I don't have to tell you that it isn't. You felt your weight increase suddenly at the same time I did. What is wrong?"

"Nothing wrong," said the engineer. "That's what you get with gravital."

"You mean they're supposed to run that way? Overlapping so that for five minutes we have Earth or Earth-and-a-half gravity and then none?"

"It's not *supposed* to be that way," said Vogel. "But nobody ever built a setup like this that worked any better." He added defensively: "Of course, if you want, you can check with the company that makes these units."

"I'm not trying to challenge your knowledge, and I'm not anxious to make myself look silly. I have a sound reason for asking these questions. There is a possibility of sabotage."

The engineer's grin was wider than the remark seemed to require.

"All right," said Cameron tiredly. "Suppose you tell me why sabotage is so unlikely."

"Well," explained the gravital engineer, "it would have to be someone living here, and he wouldn't like it if he suddenly got double or triple gravity or maybe none at all. But there's another reason. Now take a gravital unit. Any gravital unit. Most people think of it as just that—a unit. It isn't really that at all. It has three parts.

"One part is a power source; that can be anything as long as

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it's big enough. Our power source is a nuclear pile, buried deep in the asteroid. You'd have to take Handicap Haven apart to get to it. Part two is the gravital coil, which actually produces the gravity and is simple and just about indestructible. Part three is the gravital control. It calculates the relationship between the amount of power flowing through the gravital coil and the strength of the created gravity field in any one microsecond. It uses the computed relationship to alter the power flowing through in the next microsecond to get the same gravity. No change of power, no gravity. I guess you could call the control unit a computer, as good a one as is made for any purpose."

The engineer rubbed his chin. "Fatigue," he continued. "The gravital control is an intricate computer that's subject to fatigue. That's why it has to rest an hour and a half to do forty-five minutes of work. Naturally they don't want anyone tinkering with it. It's non-repairable. Crack the case open and it won't work. But first you have to open it. Mind you, that can be done. But I wouldn't want to try it without a high-powered lab set-up."

If it didn't seem completely foolproof, neither did it seem a likely source of trouble. "Then we can forget about the gravital units," said Cameron, arising. "But what about hand weapons? Are there any available?"

"You mean toasters?"

"Anything that's lethal."

"Nothing. No knives even. Maybe a stray bar or so of metal." Vogel scratched his head. "There is something dangerous, though. Dangerous if you know how to take hold of it."

Instantly Cameron was alert. "What's that?"

"Why, the asteroid itself. You can't physically touch any part of the gravital unit. But if you could somehow sneak an impulse into the computer and change the direction of the field . . ." Vogel was very grave. "You could pick up Handicap Haven and throw it anywhere you wanted. At the Earth, say. Thirty miles in diameter is a big hunk of rock."

It was this kind of information Cameron was looking for, though the engineer seemed to regard the occasion as merely a social call. "Is there any possibility of that occurring?" he asked quietly.

The engineer grinned. "Never happened, but they're ready for things like that with any gravital system. They got monitor stations all over — the moons of Jupiter, Mars, Earth, Venus.

"Any time the gravital com-

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puter gets dizzy, the monitor overrides it. If that fails, they send a jammer impulse and freeze it up tight. It won't work until they let loose."

Cameron sighed. He was getting very little help or information from Vogel. "All right," he said. "You've told me what I wanted to know."

He watched the engineer depart for the gravity-generating chamber far below the surface of the asteroid.

THE post on Handicap Haven wasn't pleasant; it wasn't an experience a normal human would desire. It did have advantages — advancement came in sizes directly proportional to the disagreeableness of the place.

Ten months to go on a year's assignment. If Cameron could survive that period with nothing to mar his administration, he was in line for better positions. A suicide or any other kind of unpleasantness that would focus the attention of the outside world on the forgotten asteroid was definitely unwelcome.

He flipped on the telecom. "Rocket dome. Get me the pilot."

When the robot finally answered, it wasn't encouraging. "I'm sorry. There is no answer."

"Then trace him," he snapped. "If he's not in the rocket dome, he's in the main dome. I want you to get him at once."

A few seconds of silence followed. "There is no record of the pilot leaving the rocket dome."

His heart skipped; with an effort he spoke carefully. "Scan the whole area. Understand? You've got to find him."

"Scanning is not possible. The system is out of operation in that area."

"All right," he said, starting to shake. "Send out repair robots." They were efficient in the sense they always did the work they were set to do, but not in terms of speed.

"The robots were dispatched as soon as scanning failed to work. Are there any other instructions?"

He thought about that. He needed help, plenty of it. Vogel? He'd be ready and willing, but that would leave the gravity-generating setup unprotected. Better do without him.

Who else? The sour old nurse who'd signed up because she wanted quick credits toward retirement? Or the sweet young thing who had bravely volunteered because someone ought to help those poor unfortunate men? Not the women, of course. She had a bad habit of fainting when she saw blood. Probably that was why she couldn't get a position in a regular planetary hospital.

That was all, except the ro-

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bots, who weren't much help in a case like this. That and the rocket pilot. For some reason he wasn't available.

The damned place was undermanned. Always had been. Nobody wanted to come except the mildly psychotic, the inefficient and lazy, or, conceivably, an ambitious young doctor like himself. Mentally, Cameron berated the last category. If anything serious happened here, such a doctor might end his career bandaging scratches at a children's playground.

"Instructions," he said. "Yes. Leave word in gravity-generating for Vogel. Tell him to throw everything he's got around the units. Watch them."

"Is that all?"

"Not quite. Send six general purpose robots. I'll pick them up at the entrance to the rocket dome."

"Repair robots are already in that area. Will they do as well?"

"They will not. I want geepees for another reason." They wouldn't be much help, true, but the best he could manage.

DOCCHI waited near the rocket dome. Not hiding, merely inconspicuous among the carefully nurtured shrubbery that was supposed to give the illusion of Earth. If the plants failed in that respect, at least they contributed to the oxygen supply of the asteroid.

"Good girl," said Docchi. "That Nona is wonderful."

Jordan could feel him relax. "A regular mechanical marvel," he agreed. "But we can gas about that later. Let's get going."

Docchi glanced around and then walked boldly into the passageway that connected the main dome with the much smaller, adjacent rocket dome. Normally, it was never dark in the inhabited parts of the asteroid; a modulated twilight was considered more conducive to the slumber of the handicapped. But it wasn't twilight as they neared the rocket dome—it was a full-scale rehearsal for the darkness of interplanetary space.

Docchi stopped before the emergency airlock which loomed solidly in front of them. "I hope Nona was able to cut this out of the circuit," he said anxiously.

"She understood, didn't she?" asked Jordan. He reached out and the great slab moved easily aside in its grooves. "The trouble with you is that you lack confidence."

Docchi, listening with a frown, didn't answer.

"Okay, I hear it, too," whispered Jordan. "We'd better get well inside before he reaches us."

Docchi walked rapidly into the darkness of the rocket dome. He allowed his face to become faint-

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ly luminescent, the one part of his altered metabolism that he had learned to control, when he wasn't under emotional strain.

He was nervous now, but his control had to be right. Enough light so that he'd be noticed, not so much that details of his appearance would be plain.

The footsteps came nearer, accompanied by a steady volume of profanity. Docchi flashed his face once and then lowered the intensity almost immediately.

The footsteps stopped. "Docchi?"

"No. Just a lonely little light bulb out for an evening stroll."

The rocket pilot's laughter wasn't altogether friendly. "I know it's you. I meant, what are you doing here?"

"I saw the lights in the rocket dome go out. The entrance was open, so I came in. Maybe I can help."

"They're off, all right. Everything. Even the standby system." The rocket pilot moved closer. The deadly little toaster was in his hand. "You can't help. You'd better get out. It's against regulations for you to be in here."

Docchi ignored the weapon. "What happened? Did a meteor strike?"

The pilot grunted. "Not likely." He peered intently at the barely visible silhouette. "Well, I see you're getting smart. You should do that all the time. You look better that way, even if they're not usable arms. You look . . ." His voice faded away.

"Sure, almost human," Docchi finished for him. "Not like a pair of legs and a spinal column with a lightning bug stuck on top."

"I didn't say that. So you're sensitive about it, eh? Maybe that's not your fault. Anyway, you'd better get going."

"But I don't want to go," said Docchi deliberately. "I'm not afraid of the dark. Are you?"

"Cut the psycho talk, Docchi. All your circuits are working and you know it. Now get out of here before I take your fake hand and drag you out."

"Now you've hurt my feelings," declared Docchi reproachfully, nimbly stepping away.

"You asked for it," growled the pilot, lunging after him. What he took hold of wasn't an imitation hand, made of plastic. It was flesh and blood. That was why the pilot screamed, once, before he was lifted off his feet and slammed to the floor.

Docchi bent double. The dark figure on his back came over his head like a sword from a scabbard.

"Jor—"

"Yeah," said Jordan.

He wrapped one arm around the pilot's throat and clamped it

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tight. With the other he felt for the toaster the pilot still held. Effortlessly he tore it away and used the butt with just enough force to knock the pilot unconscious without smashing the skull. Docchi stood by until it was over. All he could offer was an ineffectual kick, not balanced by arms.

It wasn't needed.

"Let there be light," ordered Jordan, laughing, and there was a feeble, flickering illumination from Docchi.

Jordan was balancing himself on his hands. A strong head, massive, powerful arms and shoulders. His body ended at his chest. A round metal capsule contained his digestive system.

"Dead?" Docchi looked down at the pilot.

Jordan rocked forward and listened for the heartbeat. "Nah," he said. "I remembered in time that we can't afford to kill anyone."

"Good," said Docchi, and stifled an exclamation as something coiled around his leg. His reactions were fast; he broke loose almost instantly.

"Repair robot," said Jordan, looking around. "The place is lousy with them."

Docchi blinked on and off involuntarily and the robot came toward him.

"Friendly creature," observed Jordan. "He's offering to fix your lighting system for you."

Docchi ignored the squat contrivance and stared at the pilot. "Now what?" he asked.

"Agreed," said Jordan. "He needs attention. *Not* the kind I gave him." He balanced the toaster in his hand and burned a small hole in the little wheeled monster. Tentacles emerged from the side of the machine and felt puzzledly at the damaged area. The tentacles were withdrawn and presently reappeared with a small torch and began welding.

Jordan pulled the unconscious pilot toward him. He leaned against the machine, raised the inert form over his head and laid it gently on the top flat surface. Another tentacle reached out to investigate the body of the pilot. Jordan welded the joints solid with the toaster. Three times he repeated the process until the pilot was fastened to the robot.

"The thing will stay here, repairing itself, until it's completely sound again," remarked Jordan. "However, that can be fixed." He adjusted the toaster beam to an imperceptible thickness. Deftly he sliced through the control case and removed a circular section. He reached inside and ripped out circuits. "No further self-repair," he said cheerfully. "Now I'm going to need your help. From a time stand-

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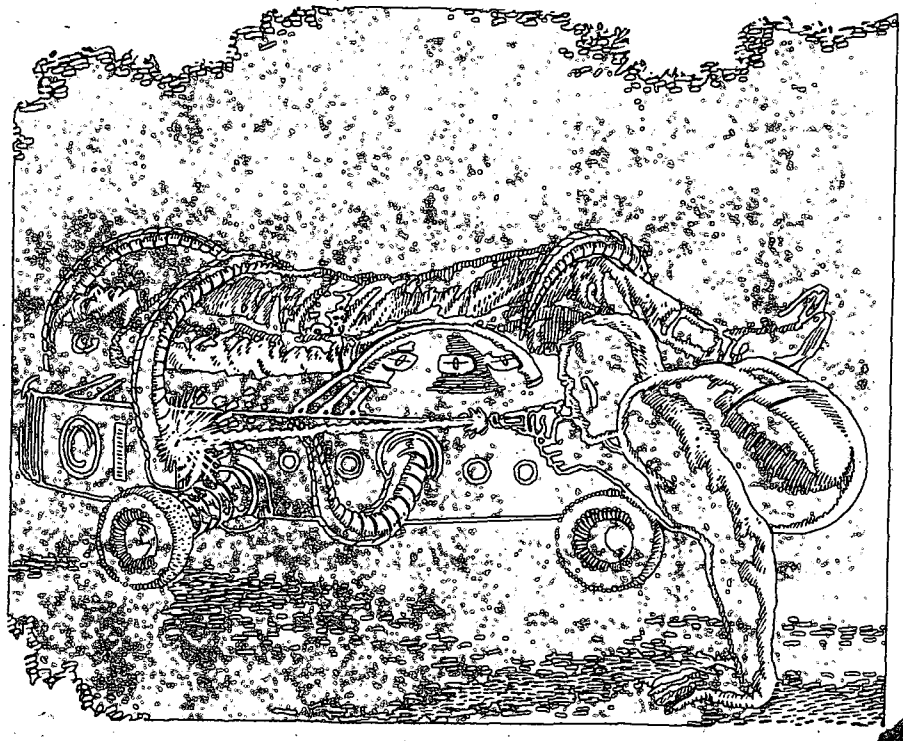
point, I think it's a good idea to run the robot around the main dome a few times before it delivers the pilot to the hospital. No point in giving ourselves away before we're ready."

Docchi bent over the robot, and with his help the proper sequence was implanted. The machine scurried erratically away.

Docchi watched it go. "Time for us to be on our way." He bent double for Jordan. The arms folded around his neck, but Jordan made no effort to climb up onto his back. For a panic moment Docchi knew how the pilot felt when strength, where there shouldn't have been strength, reached out from the darkness and gripped his throat.

He shook the thought from his mind. "Get on my back," he insisted.

"You're tired," said Jordan. "Half gravity or not, you can't



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carry me any farther." His fingers worked swiftly and the carrying harness fell to the floor. "Stay down," growled Jordan. "Listen."

Docchi listened. "Geepees!"

"Yeah," said Jordan. "Now get to the rocket."

"What can I do when I get there? You'll have to help me."

"You'll figure something out when the time comes. Hurry up!"

"Not without you," said Docchi stubbornly, without moving.

A huge paw clamped around the back of his skull. "Listen to me," whispered Jordan fiercely. "Together we were a better man than the pilot—your legs and my arms. It's up to us to prove that separately we are a match for Cameron and his geepees."

"We're not trying to *prove* anything," said Docchi.

A brilliant light sliced through the darkness and swept around the rocket dome.

"Maybe we are," said Jordan. Impatiently, he hitched himself along the ground. "I think I am."

"What are you going to do?"

"I'm going up. With no legs, that's where I belong."

He grasped the structural steel member in his great hands, and in the light gravity, ascended rapidly.

"Careful," warned Docchi.

"This is no time to be careful." His voice floated down from high in the lacy structure. It wasn't completely dark; the lights were getting nearer. Docchi decided it was possible for Jordan to see what he was doing.

They hadn't expected to be discovered so soon. But the issue had not yet been settled against them. Docchi settled into a long stride, avoiding the low-slung repair robots that seemed to be everywhere. If Jordan refused to give up, Docchi had to try.

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He stayed well ahead of the oncoming general purpose robots.

HE reached the rocket and barely had time to look around. It was enough, however. The ship's passenger and freight locks were closed. Nona had either not understood all their instructions, or she hadn't been able to carry them out. The first, probably. She had put the light and scanning circuits out of commission with no tools except her hands. That and her uncanny knowledge of the inner workings of machines. It was too much to expect that she should also have the ship ready and waiting for them.

It was up to him to get in. If he had the toaster they'd taken from the pilot, he might have been able to soften the proper area of the passenger lock. But he didn't. Not having arms, he couldn't have used it. For that reason Jordan had kept the weapon.

The alternative was to search the surrounding mechanical jungle for an external control of the rocket. There had to be one, at least for the airlocks. Then it was a matter of luck whether he could work it.

The approaching lights warned him that he no longer had that alternative. If Cameron hadn't tried to search the rocket dome as he came along, the geepees would be solidly ringed around the ship now. That was Cameron's mistake, however, and he might make more.

In all probability Jordan was still at large. Perhaps nearby. Would Cameron know that? He might not.

Docchi descended into the shallow landing pit. Until both of them were caught, there was always a chance. He had to hide, but the landing pit seemed remarkably ill-suited for that purpose.

He leaned against the stern tube cluster and tried to shake his brain into activity. The metal pressed hard into the thin flesh that covered his back. In the smooth glazed surface of the landing pit, the only answer was the tubes.

He straightened up and looked into them. A small boy might climb inside and crawl out of sight. Or a grown man who had no shoulders or arms to get wedged in the narrow cylinder.

Out in space, the inner ends of the tubes were closed with a combustion cap wherein the fuel was ignited. But in the dome, where the ship was not used for months at a time . . .

Yes, there was that possibility.

He tried a lower tube. He lay on the floor and thrust his head inside. He wriggled and shoved

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with his feet until he had forced himself entirely in. It was dark and terrifying, but no time for claustrophobia.

He stopped momentarily and listened. A geepee descended noisily into the landing pit. The absence of any other sound indicated to Docchi that it was radio-controlled.

He drove himself on, though it was slow progress. The walls were smooth and it was difficult to get much purchase. The going became even tougher—the tube was getting smaller. Not much, but enough to matter.

Again he stopped. Outside, there was the characteristic sputter, like frying, that the toaster beam made when it struck metal. A great clatter followed.

"Get him!" shouted Cameron. "He's up there!"

Jordan had arrived and had picked off a geepee. And it wasn't going to be easy for Cameron to capture him. The diversion would help.

"Don't use heat," ordered Cameron. "Get your lights on him. Blind him. Drive him in a corner and then go up and get him."

Docchi had been wrong; the geepees were controlled by voice, not radio. That would make it easier for him once he got inside the ship. If he did.

It looked as though he would. The tube wasn't getting narrower. More important, the air was not noticeably stale. The combustion cap had been retracted, which was a lucky break. His feet slipped. It didn't matter; somehow he inched along. Blood was pounding in his veins from the constriction, but his head emerged in the rocket.

He stared at the retracted combustion cap a few feet away. If he had arms, he could grasp it and pull himself free. But if he had arms, he would never have gotten this far. He wriggled until his body was nearly out and only his legs were in the tube. He kicked hard, fell to the floor.

He lay there while his head cleared, then rolled to his feet and staggered forward to the control compartment. The rocket was his, but he didn't want it for himself alone.

He stared thoughtfully at the instrument panel. It had been a long time since he had operated a ship. When he understood the controls, he bent down and thrust his chin against the gravital dial. Laboriously he turned it to the proper setting. Then he sat down and kicked on a switch. The ship rocked and rose a few inches.

Chances were that Cameron wouldn't notice that in the confusion outside. If he did, he had thirty seconds in which to stop Docchi. That wouldn't be enough for Cameron.

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"Rocket landing," said Docchi when the allotted time passed. "Emergency instructions. Emergency instructions. Stand by." Strictly speaking, that wasn't necessary, for the frequency he was using assured him of complete control.

"All energized geepees lend assistance. This order supersedes previous orders. Additional equipment necessary." After listing the equipment, he sat back and chuckled.

With his knee he turned on the external lights, got up and walked to the passenger lock, brushing against the switch. The airlock opened. He stood boldly at the threshold and looked out. The rocket dome was floodlighted by the ship.

"All right, Jordan, you can come down now," he called.

Jordan appeared overhead, hanging from a beam. He swung along it until he reached a column, down which he descended. He propelled himself over the floor and up the ramp in his awkward fashion. Balancing on his hands, he gazed up at Docchi.

"Well, monster, how did you do it?"

"Monster yourself," said Docchi. "Do what?"

"I saw you crawl in the rocket tubes," said Jordan. "But what did you do after you got inside?"

"Cameron's a medic," said Docchi, "not mechanically inclined. He forgot that an emergency rocket landing cancels any verbal orders. So I took the ship up a few inches. Geepees aren't very bright; that satisfied them that I was coming in for a landing. What Cameron should have done was splash some heat against a gravital unit, and then, having created an artificial emergency condition, in the main dome, he could have directed the geepees from the gravity control center. After that, he would have had top priority, not me."

"But they rushed off, carrying Cameron with them." Jordan looked puzzled.

"Easy. I told the geepees that there was danger of crashing and that they must remove any human beings nearby, whether they were willing or not. You weren't nearby and that let you out. They took Cameron because he was."

"It's ours!" breathed Jordan. "But what about Anti and Nona?"

"Anti's taken care of. As far as the geepees are concerned, she comes under the heading of emergency landing material. They'll bring her. Nona is supposed to be waiting with Anti." Docchi frowned. "There's nothing we can do if she isn't. Meanwhile you'd better get ready to take the ship off."

Jordan swung himself inside.

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Docchi remained at the passenger lock, waiting. He heard the geepees first and saw them seconds later. They came into sight half pushing, half carrying a huge rectangular tank. With unexpected robotic ingenuity, they had mounted it on four of their smaller brethren, the squat repair robots, which served to support the tremendous weight.

The tank was filled with blue liquid. Twisted pipes dangled from the ends; it had been torn and lifted from its foundation. Broken plants still clung to the narrow ledge on top and moist soil adhered to the sides. Five geepees pushed it rapidly toward the ship, mechanically oblivious to the disheveled man who frustratedly shouted and struck at them.

"Jordan, open the freight lock."

In response the ship rose a few more inches and hung quivering. A section of the ship hinged outward and downward to form a ramp. The ship was ready to take on cargo.

Docchi stood at his post. That damn fool Cameron should have stayed in the main dome where the geepees had released him. His presence added an unwelcome complication. Still, it should be easy enough to get rid of him when the time came.

It was Nona who really worried him. She wasn't anywhere to be seen. He took an uncertain step down the ramp, came back, shaking his head. It was impossible to look for her now, though he wanted to.

The tank neared the ship. A few feet of it projected onto the ramp. The geepees stopped; their efforts lost momentum. They looked bewildered.

The tank rolled backward. The geepees shook, buzzed and looked around, primarily at Docchi. He didn't wait any longer. He leaped into the ship.

"Close the passenger lock!" he shouted.

Jordan looked up questioningly from the controls.

"Vogel, the engineer," explained Docchi. "He must have seen the geepees on scanning when they entered the main dome. He's trying to do what Cameron should have done, but didn't have enough sense to do."

The passenger lock swung ponderously shut behind him.

"Now what?" Jordan asked, worried.

"First, let's see what you can get on the telecom," said Docchi.

The angle was impossible, so close to the ship, but they did manage to get a corner of the tank on the screen. Apparently it was resting where Docchi had last seen it, though it was difficult to be sure because the curve of the ship loomed so large.

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"Maybe we'd better get out of here," suggested Jordan nervously.

"Without the tank? Not a chance. Vogel hasn't got complete control of them yet." That seemed to be true. The geepees were nearly motionless, paralyzed.

"What shall I do?" asked Jordan.

"Give me full power on the radio," said Docchi. "Burn it out if you have to. I think the engineer is at the wrong angle to broadcast much power to them. Besides, the intervening structure is absorbing most of his signal."

He waited until Jordan had complied. "The tank must be placed in the ship," he added.

Geepees were not designed to sift contradictory commands that were nearly at the same level of urgency. Their reasoning power was feeble, but the mechanism was complicated enough. In that respect they resembled humans. Borderline decisions were difficult.

"More power," whispered Docchi.

Sweating, Jordan obeyed.

Marionettes. This string led toward a certain action. Another, intrinsically more important, but suddenly far less powerful, pulled for something else. Circuits burned within electronic brains. Micro-relays fluttered under the stress.

Choice . . .

Stiffly the geepees moved and grasped the tank. The quality of decision, in this case, was strained. Inch by inch the tank rolled up the ramp.

"When it's completely on, raise the ramp," Docchi whispered to Jordan in an even lower voice.

One geepee wavered and fell. Motionless, it lay there. The remaining four were barely equal to the task.

"Now," said Docchi.

The freight ramp began to rise. The tank picked up speed as it rolled into the ship.

"Geepees, save yourselves!" shouted Docchi.

They leaped from the ramp.

Jordan breathed deeply. "I don't think they can hurt us now."

Docchi nodded. "Get me ship-to-asteroid communication, if there's any radio left."

"There is." Jordan made the adjustment.

"Vogel, we're going out. Give us the proper sequence and save the dome some damage."

There was no reply.

"He's trying to bluff," said Jordan. "He knows the airlocks to the main dome will automatically close if we do break through."

"Sure," said Docchi. "Everyone in the main dome is safe, *if* every-

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one is in there. Vogel, we'll give you time to think about that."

Jordan gave him the time until it hurt, waiting. Meanwhile he flipped on the telecom and searched the rocket dome. Nothing was moving; no geepee was in sight. Docchi watched the screen with interest. What he thought didn't show on his face.

Still there was no reply from Vogel.

"All right," Docchi said in a low, hard voice. "Jordan, take it out. Hit the shell with the bow of the rocket."

The ship hardly quivered as it ripped through the transparent covering of the rocket dome. The worst sound was unheard: the hiss of air escaping through the great hole in the envelope.

Jordan sat at the controls, gripping the levers. "I couldn't tell," he said slowly. "It happened too fast for me to be sure. Maybe Vogel did have the inner shell out of the way. In that event, it's all right because it would close immediately. The outer shell is supposed to be self-sealing, but I doubt if it could handle that much damage."

He twisted the lever and the ship leaped forward.

"Cameron I don't mind. He had enough time to get out if he wanted to. But I keep thinking that Nona might be in there."

Docchi avoided his eyes. There was no light at all in his face. He walked away.

Jordan rocked back and forth. The hemisphere that held what remained of his body was well suited for that. He set the auto controls and reduced the gravity to one-quarter Earth normal. He bent his great arms and shoved himself into the air, deftly catching hold of a guide rail. He would have to go with Docchi. But not at the moment. He felt bad.

That is, he did until he saw a light blinking at a cabin door. He had to investigate that first.

JORDAN caught up before Docchi reached the cargo hold. In the lesser gravity of the ship Jordan was truly at home.

Docchi turned and waited for him. Jordan still carried the weapon he had taken from the pilot. It was clipped to the sacklike garment he wore, dangling from his midsection, which, for him, was just below his shoulders. Down the corridor he flew, swinging from the guide rails lightly, though gravity on the ship was as erratic as on the asteroid.

Docchi braced himself. Locomotion was not so easy for him.

Jordan halted beside him and dangled from one hand. "We have another passenger."

Docchi stiffened. "Who?"

"I could describe her," said Jordan. "But why, when a name

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will do at least as well?"

"Nona!" said Docchi. He slumped in sudden relief against the wall. "How did she get in the ship?"

"A good question," said Jordan. "Remind me to ask her that sometime when she's able to answer. But since I don't know, I'll have to use my imagination. My guess is that, after she jammed the lights and scanners in the rocket dome, she walked to the ship and tapped the passenger lock three times in the right places, or something just as improbable. The lock opened for her whether it was supposed to or not."

"As good a guess as any," agreed Docchi.

"We may as well make our assumptions complete. Once inside, she felt tired. She found a comfortable cabin and fell asleep in it. She remained asleep throughout our skirmish with the geepees."

"She deserves a rest," said Docchi.

"She does. But if she had waited a few minutes to take it, she'd have saved you the trouble of crawling through the tubes."

"She did her part and more," Docchi argued. "We depend too much on her. Next we'll expect her to escort us personally to the stars." He straightened up. "Let's go. Anti is waiting for us."

The cargo hold was sizable. It had to be to contain the tank, battered and twisted though it was. Equipment had been jarred from storage racks and lay in tangled heaps on the floor.

"Anti!" called Docchi.

"Here."

"Are you hurt?"

"Never felt a thing," came the cheerful reply.

JORDAN scaled the side of the tank. He reached the top and peered over. "She seems all right," he called down. "Part of the acid's gone. Otherwise no damage."

Damage enough, however. Acid was a matter of life for Anti. It had been splashed from the tank and, where it had spilled, metal was corroding rapidly. The wall against which the tank had crashed was bent and partly eaten through. That was no reason for alarm; the scavenging system of the ship would handle acid. The real question was what to do for Anti.

"I've stewed in this soup for years," said Anti. "Get me out of here."

"How?"

"If you weren't as stupid as doctors pretend to be, you'd know how. No gravity, of course. I've got muscles, more than you think. I can walk as long as my bones don't break from the weight."

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No gravity would be rough on Docchi; having no arms, he would be virtually helpless. The prospect of floating free without being able to grasp something was terrifying.

"As soon as we can manage it," he said, forcing down his fear. "First we've got to drain and store the acid."

Jordan had anticipated that. He'd swung off the tank and was busy expelling the water from an auxiliary compartment into space. As soon as the compartment was empty, he led a hose from it to the tank.

The pumps sucked and the acid level fell slowly.

Docchi felt the ship lurch familiarly. "Hurry," he called out to Jordan.

The gravital unit was acting up. Presumably it was getting ready to cut out. If it did—well, a free-floating globe of acid would be as destructive to the ship and those in it as a high velocity meteor cluster.

Jordan jammed the lever as far as it would go and held it there. "All out," said Jordan presently, and let the hose roll back into the wall. Done in plenty of time. The gravital unit remained in operation for a full minute.

As soon as she was weightless, Anti rose out of the tank.

In all the time Docchi had known her, he had seen no more than a face framed in blue acid. Periodic surgery, where it was necessary, had trimmed the flesh from her face. For the rest, she lived submerged in a corrosive liquid that destroyed the wild tissue as fast as it grew. Or nearly as fast.

Docchi averted his eyes.

"Well, junkman, look at a real monster," snapped Anti.

HUMANS were not meant to grow that large. But it was not obscene to Docchi, merely unbelievable. Jupiter is not repulsive because it is the bulging giant of planets; it is overwhelming, and so was Anti.

"How will you live out of the acid?" he stammered.

"How really unobservant some men are," said Anti loftily. "I anticipated our little journey and prepared for it. If you look closely, you will notice I have on a special surgery robe. It's the only thing in the Solar System that will fit me. It's fabricated from a spongelike substance and holds enough acid to last me about thirty-six hours."

She grasped a rail and propelled herself toward the corridor. Normally that was a spacious passageway. For her it was a close fit.

Satellites, one glowing and the other swinging in an eccentric orbit, followed after her.

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NONA was standing before the instrument panel when they came back. There was an impressive array of dials, lights and levers in front of her, but she wasn't interested in these. A single small dial, separate from the rest, held her complete attention. She seemed disturbed by what she saw or didn't see. Disturbed or excited, it was difficult to say which.

Anti stopped. "Look at her. If I didn't know she's a freak like the rest of us, the only one, in fact, who was born that way, it would be easy to hate her—she's so disgustingly normal."

Normal? True and yet not true. Surgical techniques that could take a body apart and put it back together again with a skill once reserved for the repair of machines had made beauty commonplace. No more sagging muscles, wrinkles; even the aged were attractive and youthful - seeming until the day they died. No more ill-formed limbs, misshapen bodies. Everyone was handsome or beautiful. No exceptions.

None to speak of, at least.

The accidentals didn't belong, of course. In another day most of them would have been candidates for a waxworks or the formaldehyde of a specimen bottle.

Nona fitted neither category; she wasn't a repair job. Looking at her closely—and why not?—she was an original work as far from the normal in one direction as Anti, for example, was in the other.

"Why is she staring at the little dial?" asked Anti as the others slipped past her and came into the compartment. "Is there something wrong with it?" She shrugged. "I would be interested in the big dials. The ones with colored lights."

"That's Nona." Docchi smiled. "I'm sure she's never been in the control room of a rocket before, and yet she went straight to the most curious thing in it. She's looking at the gravital indicator. Directly behind it is the gravital unit."

"How do you know? Does it say so?"

"It doesn't. You have to be trained to recognize it, or else be Nona."

Anti dismissed that intellectual feat. "What are you waiting for? You know she can't hear us. Go stand in front of her."

"How do I get there?" Docchi had risen a few inches from the floor, now that Jordan had released him from his grip.

"A good engineer would have enough sense to put on magne-slippers. Nona did." Anti grasped his jacket. How she was able to move was uncertain. The tissues that surrounded the woman were too vast to permit the perception

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of individual motions. Nevertheless, she proceeded to the center of the compartment, and with her came Docchi.

Nona turned before they reached her.

"My poor boy," sighed Anti. "You do a very bad job of concealing your emotions, if that's what you're trying to do. Anyway, stop glowing like a rainbow and say something."

"Hello," said Docchi.

Nona smiled at him, though it was Anti that she came to.

"No, not too close, child. Don't touch the surgery robe unless you want your pretty face to peel off like a plastiwrapper."

Nona stopped; she said nothing.

Anti shook her head hopelessly. "I wish you would learn to read lips or at least recognize written words. It's so difficult to communicate with you."

"She knows facial expressions and actions, I think," said Docchi. "She's good at emotions. Words are a foreign concept to her."

"What other concepts does anyone think with?" asked Anti dubiously.

"Maybe mathematical relationships," answered Docchi. "Though she doesn't. They've tested her for that." He frowned. "I don't know what concepts she does think with. I wish I did."

"Save some of that worry and apply it to our present situation," said Anti. "The object of your concern doesn't seem to be interested in it."

That was true. Nona had wandered back and was staring at the gravital indicator again. What she saw to hold her attention was a puzzle.

In some ways she seemed irresponsible and childlike. That was an elusive thought, though: whose child? Not really, of course. Her parents were obscure technicians and mechanics, descendants of a long line of mechanics and technicians. The question he had asked himself was this: where and how does she belong? He couldn't answer.

With an effort Docchi came back to reality. "We appealed to the Medicouncil," he said. "We asked for a ship to go to the nearest star. It would have to be a rocket, naturally. Even allowing for a better design than any we now have, the journey would take a long time, forty or fifty years going and the same length of time back. That's entirely too long for a normal, but it wouldn't matter to a biocompensator."

"Why a rocket?" interrupted Jordan. "Why not some form of gravity drive?"

"An attractive idea," admitted Docchi. "Theoretically, there's no limit to gravity drive except light speed, and even that's not

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certain. If it would work, the time element could be cut to a fraction. But the last twenty years have proved that gravity drives won't work at all outside the Solar System. They function very poorly even when the ship is as far out as Jupiter's orbit."

"I thought the gravity drive on a ship was nearly the same as the gravital unit on the asteroid," said Jordan. "Why won't they function?"

"I don't know why," answered Docchi impatiently. "If I did, I wouldn't be marooned on Handicap Haven. Arms or no arms, biocompensator or not, I'd be the most important scientist on Earth."

"With a multitude of pretty women competing for your affections," added Anti.

"I think he'd settle for one. A certain one," suggested Jordan.

"Poor, unimaginative boy," said Anti. "In my youth . . ."

"We've heard about your youth," said Jordan.

"Youth and love are long since past for both of you. Talk about them privately if you want, but not now." Docchi glowered at them. "Anyway," he resumed, "gravity drive is out. One time they had hopes for it, but no longer. It should be able to drive this ship. Actually, its sole function is to provide an artificial gravity *inside* the ship, for passenger comfort. So rocket ship it is. That's what we asked for. The Medicouncil refused. Therefore we're going to appeal to a higher authority."

"Fine," said Anti. "How?"

"We've discussed it," answered Docchi. "Ultimately the Medicouncil is responsible to the Solar Government. And in turn—"

"All right, I'm in favor of it," said Anti. "I just wanted to know."

"Mars is closer," continued Docchi. "But Earth is the seat of government. As soon as we get there . . ." He stopped suddenly and listened.

Anti listened with him and waited until she could stand it no longer. "What's the matter?" she asked. "I don't hear anything."

Jordan leaned forward in his seat and looked at the instrument panel. "That's the trouble, Anti. You're not supposed to hear anything. But you should be able to *feel* the vibration from the rocket exhaust, as long as it's on."

"I don't feel anything, either."

"Yeah," said Jordan. He looked at Docchi. "There's plenty of fuel."

MOMENTUM of the ship didn't cease when the rockets stopped, of course. They were still moving, but not very fast and not in the direction they

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wanted to go. Gingerly Docchi tried out the magneslippers; he was clumsy, but no longer helpless in the gravityless ship. He stared futilely at the instruments as if he could wring more secrets than the panel had electronic access to.

"It's mechanical trouble of some sort," he said uneasily. "There's one way of finding out."

Before he could move, Anti was in the corridor that led away from the control compartment.

"Stay here, Anti," he said. "I'll see what's wrong."

She reached nearly from the floor to the ceiling. She missed by scant inches the sides of the passageway. Locomotion was easy enough for her; turning around wasn't. Anti didn't turn.

"Look, honey," her voice floated back. "You brought me along for the ride. That's fine, but I'm not satisfied with it. I want to earn my fare. You stay and run the ship because you know how and I don't. I'll find out what's wrong."

"But you won't know what to do, Anti." There was no answer. "All right," he said in defeat. "Both of us ought to go. Jordan, you stay at the controls."

Anti led the way because Docchi couldn't get around her. Determinedly he shuffled along. There was a trick to magneslippers that he had nearly forgotten. Slowly it was coming back to him—shuffle instead of striding.

It was a dingy, poorly lighted passageway in an older ship. Handicap Haven definitely didn't rate the best equipment that was produced. On one side was the hull of the ship; on the other, a few small cabins. None were occupied. Anti stopped. The passageway ended in a cross corridor that led to the other side of the ship.

"We'd better check the stern rocket tubes," he said, still unable to see around her. "Open it up and we'll take a look."

"I can't," said Anti. "There are handles, but the thing won't open. There's a red light, too. Does that mean anything?"

His heart sank. "It does. Don't try to open it. With your strength, you might be unlucky enough to do it."

"That's a man for you," said Anti sharply. "First he wants me to open it, and then he tells me not to."

"There's a vacuum in there. The combustion cap has been retracted. That's the only thing that will actuate the warning signal. You'd die in a few seconds if you somehow managed to open the lock to the rocket compartment."

"What are we waiting for? Let's get busy and fix it."

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"Sure, fix it. You see, Anti, that didn't happen by itself. Someone, or something, was responsible."

"Who?"

"Did you see anyone when we were loading your tank in the ship?"

"Nothing. I heard Cameron shouting, a lot of noise. All I could see was what was directly overhead. What does that have to do with it?"

"I think it has to do with a geepee. I thought they all dropped outside. Maybe there was one that didn't."

"Why a geepee?" she asked blankly.

"In the first place, no man is strong enough to move the combustion cap. But if he should somehow manage to exert superhuman effort, as soon as the cap cleared the tubes, rocket action would cease. The air in the compartment would exhaust into space and anyone in there would die."

"So we have a dead geepee in there."

"A geepee doesn't die. Not even become inactive; it doesn't need air." Docchi tried to think the thing through. "Not only that, a geepee might be able to escape from the compartment. The lock would close as soon as the pressure dropped. But a geepee . . ."

Anti settled down grimly. "Then there's a geepee on the loose, intent on sabotage?"

"I'm afraid so," he admitted worriedly.

"What are we standing here for? We'll go back to controls and pick up the robot on radio. What it damaged, it can repair." She was partly turned around now and saw Docchi's face. "Don't tell me," she said. "I suppose I should have thought of it. The signal doesn't work inside the ship."

Docchi nodded. "It doesn't. Robots are never used aboard, so the control is set in the bow antenna and the ship, of course, is insulated."

"Well," said Anti happily, "we've got a robot hunt ahead of us."

"We do. And our bare hands to hunt it with."

"Oh, come now! It's not as bad as all that. Look, the geepee was back here when the rockets stopped. Could it get by the control compartment without our seeing it?"

"It couldn't. There are two corridors leading through the compartment, one on each side of the ship."

"That's what I thought. We came down one corridor and no geepee was in it. It has to be in the other. If it goes into a cabin, a light will shine on the outside.

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It can't really hide from us."

"Sure, we'll find out where it is. But what are we going to do with it when we find it?"

"I was thinking," said Anti. "Can you get around me when I'm standing like this?"

"I can't."

"Neither can a geepee. All I need is a toaster, or something that looks like one, and I can drive the robot into the control compartment for Jordan to pick off." Determinedly, she began to move toward the opposite corridor. "Hurry back to Jordan and tell him what we're doing. There ought to be another toaster on the ship. Probably there's one somewhere in the control compartment. Bring it back to me."

Docchi bit his lip and stared at the back of the huge woman. "All right," he answered. "But stay where you are. Don't try anything until I get back."

Anti laughed. "I value my big, fat life," she said. There were other things she valued, but she didn't mention them.

Docchi went as fast as the magneslippers would allow, which wasn't very fast. The strategy was simple, but it didn't follow that it was sound—a toaster for Jordan and one for Anti, if another could be found.

Anti would block the corridor. A geepee might go through her, but it could never squeeze past her. The robot would have to run for it. If it came toward Anti, she might be able to burn it down. But she would be firing directly into the control room. If she missed even partially—

The instruments were delicate.

It wasn't better if Jordan got the chance to bring down the robot. Anti would be in the line of fire. No, that wasn't good, either. They'd have to think of something else.

"Jordan," called Docchi as he entered the control compartment. Jordan wasn't there. Nona was, still gazing serenely at the gravity indicator.

Lights were streaming from the corridor on the opposite side of the compartment. Docchi hurried over. Jordan was just inside the entrance, the toaster clutched grimly in his hand. He was hitching his truncated body slowly toward the stern.

Coming to meet him was Anti—unarmed, enormously fat Anti. She wasn't walking; somehow it seemed more like swimming, a bulbous, flabby sea animal moving through the air. She waved her fins against the wall and propelled herself forward.

"Melt him down!" she cried.

It was difficult to make out the vaguely human form of the geepee. The powerful, shining body blended into the structure of the ship itself—unintentional camou-

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flage, though the robot wasn't aware of that. It was crouched at the threshold of a cabin, hesitating between the approaching dangers.

Jordan raised the weapon and as instantly lowered it. "Get out of the way," he told Anti.

There was no place for her to go. She was too big to enter a cabin, too massive to let the geepee squeeze by her even if she wanted it to.

"Never mind that. Get him," she answered.

A geepee was not a genius even by robot standards. It didn't need to be. Heat is deadly; a human body is a fragile thing. This it knew. It ran toward Anti. Unlike man, it didn't need magneslippers. It had magnetic metal feet which could move fast, and did.

Docchi couldn't close his eyes, though he wanted to. He had to watch. The geepee torpedoed into Anti. And it was the robot that was thrown back. Relative mass favored the monstrous woman.

The electronic brain obeyed its original instructions, whatever those were. It got to its feet and rushed toward Anti. Metal arms shot out with dazzling speed and crashed against the flesh of the fat woman. Docchi could hear the thud. No ordinary person could take that kind of punishment and live.

Anti wasn't ordinary; she was strange, even for an accidental, living far inside a deep armor of flesh. It was possible that she never felt the crushing force of those blows. Amazingly, she grasped the robot and drew it to her. And the geepee lost the advantage of leverage. The bright arms didn't flash so fast nor with such lethal power.

"Gravity!" cried Anti. "All you've got!"

She leaned against the struggling machine.

Gravity. That was something he could do. Docchi turned, took two steps before the surge of gravity hit him. It came in waves, the sequence of which he was never able to disentangle. The first wave staggered him; at the second his knees buckled and he sank to the floor. After that his eardrums hurt. He thought he could feel the ship quiver. He knew dazedly that an artificial gravity field of this magnitude was impossible, but that knowledge didn't help him move.

It vanished as suddenly as it had come. Painfully his lungs expanded. Each muscle ached. He rolled to his feet and lurched past Jordan.

He didn't find the mass of broken flesh he expected. Anti was already standing.

"Oof!" she grunted and gazed with satisfaction at the twisted grotesque shape at her feet.

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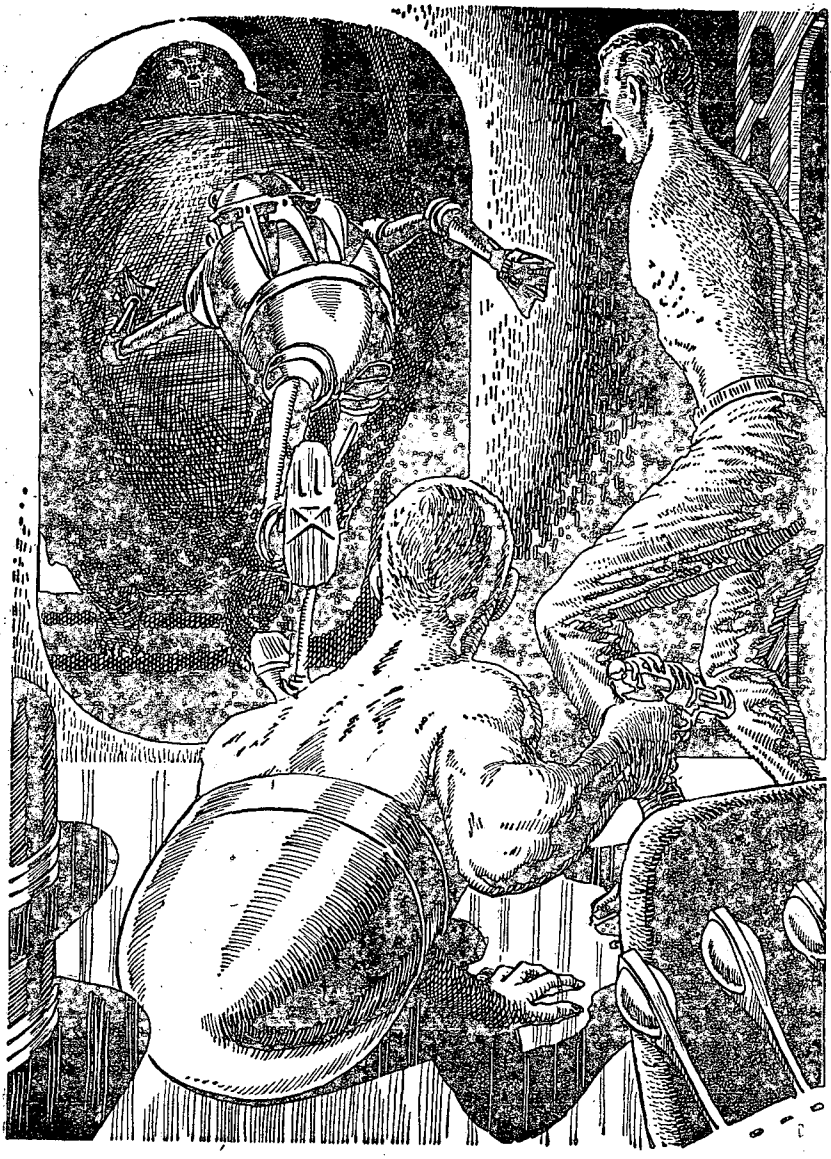

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The electronic brain had been smashed, the body flattened.

"Are you hurt?" asked Docchi gently, awed.

She waggled the extremities of her body. "Nope, I can't feel anything broken," she said solemnly. She moved back to get a better view of the robot. "I'd call that throwing my weight around. At the right time, of course. The secret's timing. And I must say you picked up your cue with the gravity well." Her laughter rolled through the ship.

"It wasn't I," said Docchi.

"Jordan? No, he's just getting up. Then who?"

"Nona," said Docchi. "It had to be her. She saw what had to be done and did it. But how she got that amount of gravity—"

"Ask her," said Anti with fond irony.

Docchi grimaced and limped back into the control room, followed by Anti and Jordan. Nona was at the gravity panel, her face pleasant and childlike.

"Gravity can be turned on or off," said Docchi puzzedly, searching her face for some sign. "And regulated, within certain narrow limits. But somehow you doubled or tripled the normal amount. How?"

Nona smiled questioningly.

"Gravity engineers would like to know that too," said Jordan. "Everybody would like to know," Anti interrupted irritably. "Except me. I'm too pragmatic, I suppose, but I want to know when we start the rockets and be on our way."

"It isn't that easy," sighed Jordan. "A retracted combustion cap in flight generally means at least one burned-out tube." He made his way to the instrument panel and looked at it glumly. "Three."

"A factor." Docchi nodded. "But I was thinking about the robot."

Anti was impatient. "An interesting subject, no doubt. What about it?"

"Where did it get instructions? Not radio; the hull of the ship cuts off all radiation. The last we knew, it was in our control."

"All right, how?"

"Voice," said Docchi. "Cameron's voice, to be exact."

"But he was in the rocket dome," Jordan objected.

"Think back to when we were loading the tank. We had to look through the telecom and the angle of vision was bad. We couldn't see much of the cargo lock. Anti couldn't see anything that wasn't directly overhead. Both Cameron and the geepee managed to get inside and we didn't know it."

Jordan hefted his weapon. "Looks like we've got another hunt on our hands. This time a nice normal doctor."

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"Keep it handy," said Docchi, glancing at the toaster. "But be careful how you use it. One homicide and we can forget what we came for. I think he'll be ready to surrender. The ship's temporarily disabled; he'll consider that damage enough."

JORDAN found the doctor in the forward section of the ship. Cameron knew better than to argue with a toaster. In a matter of minutes he was in the control room.

"Now that you've got me, what are you going to do with me?" he asked.

Docchi swiveled away from the instrument panel. "I don't expect active cooperation, of course, but I like to think you'll give your word not to hinder us hereafter."

Cameron glared. "I promise nothing of the kind."

"We can chain him to Anti," suggested Jordan. "That will keep him out of trouble."

"Like leading a poodle on a leash? Nope," said Anti indignantly. "A girl has to have some privacy."

"Don't wince, Cameron," objected Docchi. "She really was a girl once, an attractive one."

"We can put him in a spacesuit and lock his hands behind his back," said Jordan. "Something like an ancient straitjacket."

Cameron laughed.

"No, that's inhuman," said Docchi.

Jordan juggled the toaster. "I can weld with this. Let's put him in a cabin and weld the door closed. We can cut a slot to shove food in. A very narrow slot."

"Excellent. I think you have the solution. That is, unless Dr. Cameron will reconsider his decision."

Cameron shrugged. "They'll pick you up in a day or less anyway. I suppose I'm not compromising myself by agreeing to your terms."

"Good."

"A doctor's word is as good as his oath," observed Anti. "Hippocratic or hypocritic."

"Now, Anti, don't be cynical. Doctors have an economic sense as well as the next person," said Docchi gravely. He turned to Cameron. "You see, after Anti grew too massive for her skeletal structure, doctors reasoned she'd be most comfortable in the absence of gravity. That was in the early days, before successful ship gravital units were developed. They put her on an interplanetary ship and kept transferring her before each landing.

"But that grew troublesome and—expensive. They devised a new treatment; the asteroid and the tank of acid. Not being aquatic by nature, Anti resented the change. She still does."

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"I knew nothing about that," Cameron pointed out defensively.

"It was before your time." Docchi frowned at the doctor. "Tell me, why did you laugh when Jordan mentioned a spacesuit?"

Cameron grinned. "That was my project while you were busy with the robot."

"To do what? Jordan—"

But Jordan was already on his way. He was gone for some time.

"Well?" asked Docchi on his return. It really wasn't necessary; Jordan's gloomy face told the story.

"Cut to ribbons."

"All of them?"

"Every one. Beyond repair."

"What's the excitement about?" rumbled Anti. "We don't need spacesuits unless something happens to the ship and we have to go outside."

"Exactly, Anti. How do you suppose we go about replacing the defective tubes? From the outside, of course. By destroying the spacesuits, Cameron made sure we can't."

Anti opened her mouth with surprise and closed it in anger. She glowered at the doctor.

"We're still in the asteroid zone," said Cameron. "In itself, that's not dangerous. Without power to avoid stray rocks, it is. I advise you to contact the Medicouncil. They'll send a ship to pick us up and tow us in."

"No, thanks. I don't like Handicap Haven as well as you do," Anti said brusquely. She turned to Docchi. "Maybe I'm stupid for asking, but exactly what is it that's deadly about being out in space without a spacesuit?"

"Cold. Lack of air pressure. Lack of oxygen."

"Is that all? Nothing else?"

His laugh was too loud. "Isn't that enough?"

"I wanted to be sure," she said.

She beckoned to Nona, who was standing near. Together they went forward, where the spacesuits were kept.

Cameron scowled puzzledly and started to follow. Jordan waved the toaster around.

"All right," said the doctor, stopping. He rubbed his chin. "What is she thinking about?"

"I wouldn't know," said Docchi. "She's not scientifically trained, if that's what you mean. But she has a good mind, as good as her body once was."

"And how good was that?"

"We don't talk about it," said Jordan shortly.

IT was a long time before the women came back—if the weird creature that floated into the control compartment with Nona *was* Anti.

Cameron stared at her and saw

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shudderingly that it was. "You need a session with the psycho-computer," he said. "When we get back, that's the first thing we do. Can't you understand . . ."

"Be quiet," growled Jordan. "Now, Anti, explain what you've rigged up."

"Any kind of pressure is good enough as far as the outside of the body is concerned," answered Anti, flipping back the helmet. "Mechanical pressure will do as well as air pressure. I had Nona cut the spacesuits into strips and wind them around me—hard. Then I found a helmet that would fit over my head when the damaged part was cut away. It won't hold much air pressure, even taped very tight to my skin. But as long as it's pure oxygen—"

"It might be satisfactory," admitted Docchi. "But the temperature?"

"Do you think I'm going to worry about cold?" asked Anti. "Me? Way down below all this flesh?"

"Listen to me," said Cameron through his teeth. "You've already seriously threatened my career with all this childish nonsense. I won't permit you to ruin it altogether by a deliberate suicide."

"You and your stinking career," retorted Jordan tiredly. "We're not asking your permission to do anything." He turned away from the doctor. "You understand the risk, Anti? It's possible that it won't work at all."

"I've thought about it," Anti replied soberly. "On the other hand, I've thought about the asteroid."

"All right," said Jordan. Docchi nodded. Nona bobbed her head; it was doubtful that she knew what she was agreeing to.

"Let's have some telecom viewers outside," said Docchi. "One directly in back, one on each side. We've got to know what's happening."

Jordan went to the control panel and flipped levers. "They're out and working," he said, gazing at the screen. "Now, Anti, go to the freight lock. Close your helmet and wait. I'll let the air out slowly. The pressure change will be gradual. If anything seems wrong, let me know over the helmet radio and I'll yank you in immediately. Once you're outside I'll give you further instructions. Tools and equipment are in a compartment that opens into space."

Anti waddled away.

Jordan looked down at his legless body. "I suppose we have to be realistic about it—"

"We do," answered Docchi. "Anti is the only one of us who has a chance of doing the job and surviving."

Jordan adjusted a dial. "It was

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Cameron who was responsible for it. If Anti doesn't come back, you can be damn sure he'll join her."

"No threats, please," said Docchi. "When are you going to let her out?"

"She's out," said Jordan. Deliberately, he had diverted their attention while he had taken the burden of emotional strain.

Docchi glanced hastily at the telecom. Anti was hanging free in space, wrapped and strapped in strips torn from the useless spacesuits—that, and more flesh than any human had ever borne. The helmet sat jauntily on her head; the oxygen cylinder was strapped to her back. She was still intact.

"How is she?" he asked anxiously, unaware that the microphone was open.

"Fine," came Anti's reply, faint and ready. "The air's thin, but it's pure oxygen."

"Cold?" asked Docchi.

"It hasn't penetrated yet. No worse than the acid, at any rate. What do I do?"

Jordan gave her directions. The others watched. It was work to find the tools and examine the tubes for defectives, to loosen the tubes in the sockets and pull them out and push them spinning into space. It was still harder to replace them, though there was no gravity and Anti was held to the hull by magneslippers.

But it seemed more than work. To Cameron, who was watching, an odd thought occurred: In her remote past, of which he knew nothing, Anti had done something like this before. Ridiculous, of course. Yet there was a rhythm to her motions, this shapeless giant creature whose bones would break with her weight if she tried to stand at even only half Earth gravity. Rhythm, a sense of purpose, a strange pattern, an incredible gargantuan grace.

The whale plowing the waves is graceful; it cannot be otherwise in its natural habitat. The human race had produced, accidentally, one unlikely person to whom interplanetary space was not an alien thing. Anti was at last in her element.

"Now," said Jordan, keeping the tension out of his voice, "go back to the outside tool compartment. You'll find a lever. Pull. That will set the combustion cap in place."

"Done," said Anti, some minutes later.

"That's all. You can come in now."

"That's all? But I'm not cold. It hasn't reached any nerves yet."

"Come in," repeated Jordan, showing the anger of alarm.

She walked slowly over the hull to the cargo lock and, while she did, Jordan reeled in the telecom viewers. The lock was no sooner

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closed to the outside and the air hissing into the compartment than Jordan was there, opening the inner lock.

"Are you all right?" he asked.

She flipped back the helmet. There was frost on her eyebrows and her nose was a bright red. "Of course. My hands aren't a bit cold." She stripped off the heated gloves and waggled her fingers.

"It *can't* be!" protested Cameron. "You should be frozen stiff!"

"Why?" asked Anti, laughing. "It's a matter of insulation and I have plenty of that."

Cameron turned to Docchi. "When I was a kid, I saw a film of a dancer. She did a ballet, Life of the Cold Planets, I believe it was called. For some cockeyed reason, I thought of it when Anti was out there. I hadn't thought of it in years."

He rubbed his hand fretfully over his forehead. "It fascinated me when I first saw it. I couldn't get it out of my mind. When I grew older, I found out a tragic thing happened to the dancer. She was on a tour of Venus and the ship she was in disappeared. They sent out searching parties, of course. They found her after she had spent a week on a fungus plain. You know what that meant. The great ballerina was a living spore culture medium."

"Shut up," growled Jordan.

Cameron didn't seem to hear. "Naturally, she died. I can't remember her name, but I've always remembered the ballet she did. And that's funny, because it reminded me of Anti out there—"

A fist exploded in his face. If there had been more behind the blow than shoulders and a fragment of a body, his jaw would have been broken. As it was he floated through the air and crashed against the wall.

Angrily, he got to his feet. "I gave my word I wouldn't cause any trouble. The agreement evidently doesn't work both ways." He glanced significantly at the weapon Jordan carried. "Maybe you'd better be sure to have that around at all times."

"I told you to shut up," said Jordan. After that he ignored the doctor. He didn't have a body with which to do it, but somehow Jordan managed a bow. "A flawless performance. One of your very best, Antoinette."

"Do you think so?" sighed Anti. The frost had melted from her eyebrows and was trickling down her cheek. She left with Jordan.

Cameron remained behind. He felt his jaw. It was too bad about his ambitions. He knew now that he was never going to be the spectacular success he had once

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imagined. Not after these accidentals had escaped from Handicap Haven. Still, he would always be able to practice medicine somewhere in the Solar System. He'd done his best on the asteroid and this ship, and he'd been a complete ass both times.

The ballerina hadn't really died, as he had been told. It would have been better for her if she had. He succeeded in recalling her name. It had been Antoinette.

Now it was Anti. He could have found that out by checking her case history—*if* Handicap Haven had one on file. Probably not, he comforted himself. Why keep case histories of hopeless cases?

"WE'LL stick to the regular lanes," said Docchi. "I think we'll get closer. They have no reason to suspect that we're heading toward Earth. Mars is more logical, or one of the moons of Jupiter, or another asteroid."

Jordan shifted uneasily. "I'm not in favor of it. They'll pick us up before we have a chance to say anything."

"But there's nothing to distinguish us from an ordinary Earth-to-Mars rocket. We have a ship's registry on board. Pick out a ship that's in our class. Hereafter, we're going to be that ship. If Traffic blips us, and they probably won't unless we try to land, have a recording ready. Something like this: 'ME 21 zip crackle 9 reporting. Our communication is acting up. We can't hear you, Traffic.' Don't overdo the static effects but repeat that with suitable variations and I don't think they will bother us."

Shaking his head dubiously, Jordan swung away toward the repair shops.

"You look worried," said Anti.

Docchi turned around. "Yeah."

"Won't it work?"

"Sure. We'll get close to Earth. They're not looking for us around here. They don't really know why we escaped in the rocket. That's why they can't figure out where we're going."

His face was taut and his eyes were tired. "It's not that. The entire Solar Police Force has been alerted for us."

"Which means?"

"Look. We planned to bypass the Medicouncil and take our case directly to the Solar Government. If they want us as much as the radio indicates, it's not likely they'll be very sympathetic. If the Solar Government doesn't support us all the way, we'll never get another chance."

"Well?" said Anti. She seemed trimmer, more vigorous. "What are we waiting for? Let's take the last step first."

He raised his head. "The Solar Government won't like it."

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"They won't, but there's nothing they can do about it."

"I think there is—simply shoot us down. When we stole the ship, we automatically stepped into the criminal class."

"We knew that in advance."

"Is it worth it?"

"I think so," said Anti.

"In that event," he said, "I'll need time to get ready."

She scrutinized him carefully. "Maybe we can fix you up."

"With fake arms and greasepaint? No. They'll have to accept us as we are."

"A good idea. I hadn't thought of the sympathy angle."

"Not sympathy. Reality. I don't want them to approve of us as handsome accidentals and have them change their minds when they discover what we're really like."

Anti looked doubtful, but she kept her objections to herself as she waddled away.

Sitting in silence, he watched her go. She, at least, would derive some benefit. Dr. Cameron apparently hadn't noticed that exposure to extreme cold had done more to inhibit her unceasing growth than the acid bath. She'd never be normal again; that was obvious. But some day, if the cold treatment were properly investigated, she might be able to stand gravity.

He examined the telecom. They were getting closer. No longer a bright point of light, Earth was a perceptible disc. He could see the outline of oceans, shapes of land; he could imagine people.

Jordan came in. "The record is rigged up, though we haven't had to use it. But we have a friend behind us. An official friend."

"Has he blipped us?"

"Not yet. He keeps hanging on."

"Is he overtaking us?"

"He would like to."

"Don't let him."

"With this bag of bolts?"

"Shake it apart if you have to," Docchi impatiently said. "How soon can you break into a broadcasting orbit?"

"I thought that was our last resort."

"Right. As far as Anti and I are concerned, this is it. Any argument against?"

"None that I can think of," answered Jordan. "With a heavy cruiser behind us, no argument at all."

THEY were all in the control compartment. "I don't want a focus exclusively on me," Docchi was saying. "To a world of perfect normals I may look strange, but we have to avoid the family portrait effect."

"Samples," suggested Anti.

"In a sense, yes. A lot depends

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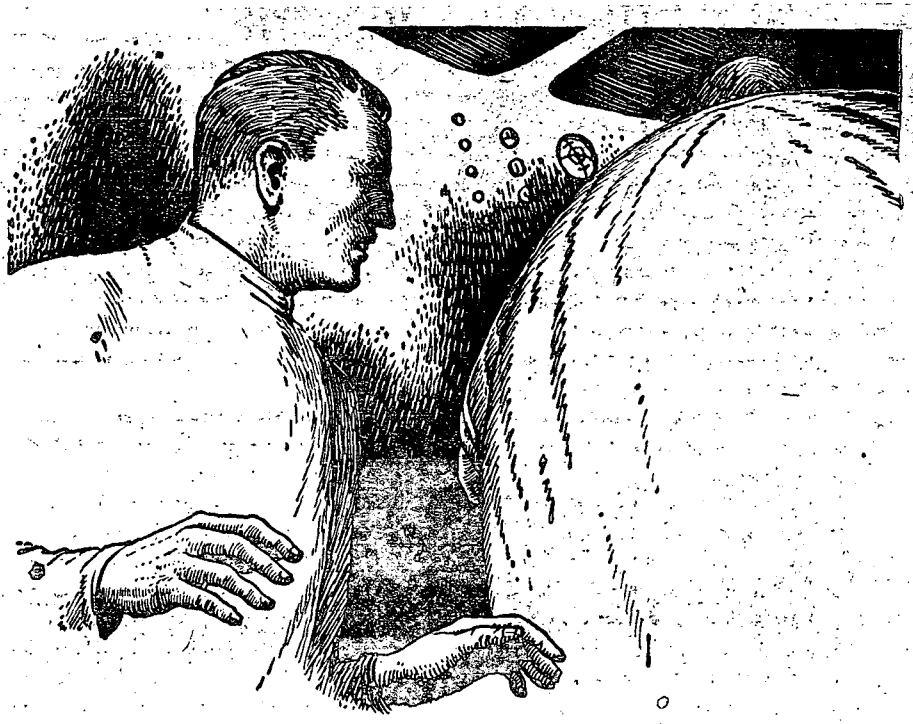

on whether they accept those samples."

For the first time Dr. Cameron began to realize what they were up to. "Wait!" he exclaimed. "You've got to listen to me!"

"We're not going to wait and we've already done enough listening to you," said Docchi. "Jordan, see that Cameron stays out of the telecom transmitting angle and doesn't interrupt. We've come too far for that."

"Sure," Jordan promised harshly. "If he makes a sound, I'll melt the teeth out of his mouth." He held the toaster against his side, out of line with the telecom, but aimed at Cameron's face.

Cameron began to shake with urgency, but he kept still.

"Ready?" Docchi asked.

"Flip the switch and we will be, with everything we've got. If they don't read us, it'll be because they don't want to."

The rocket slipped out of the approach lanes. It spun down, the stern tubes pulsing brightly, com-

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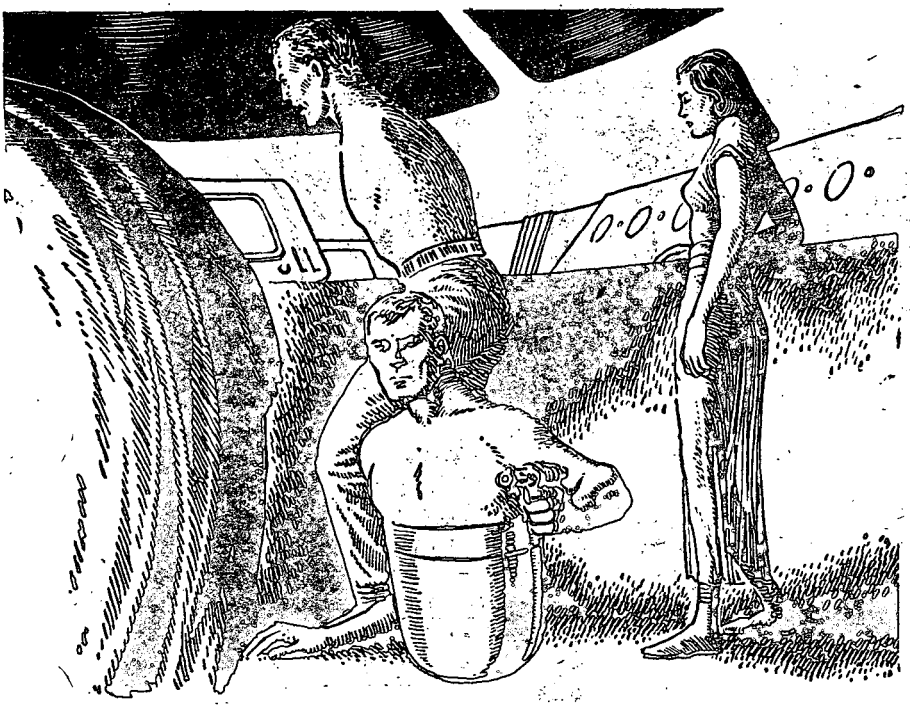

ing toward Earth in a tight trajectory.

"Citizens of the Solar System!" began Docchi. "Everyone on Earth! This is an unscheduled broadcast, an unauthorized appeal. We are using the emergency bands because, for us, it is an emergency. Who are we? Accidentals, of course, as you can see by looking at us. I know the sight isn't pretty, but we consider other things more important than appearance. Accomplishment, for example. Contributing to progress in ways normals cannot do.

"Shut away on Handicap Haven, we're denied this right. All we can do there is exist in frustration and boredom, kept alive whether we want to be or not. Yet we have a gigantic contribution to make . . . if we are allowed to leave the Solar System for Alpha Centauri! You can't travel to the stars now, although eventually you will.

"You must be puzzled, knowing how slow our present rockets are. No normal person could

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make the round trip; he would die of old age. But we accidentals can go! We would positively *not* die of old age! The Medicouncil knows that is true . . . and still will not allow us to go!"

At the side of the control compartment, Cameron opened his mouth to protest. Jordan, glancing at him, imperceptibly waggled the concealed weapon. Cameron swallowed his words and subsided without a sound.

"Biocompensation," continued Docchi evenly. "You may know about it, but in case information on it has been suppressed, let me explain: The principle of biocompensation has long been a matter of conjecture. This is the first age in which medical technology is advanced enough to explore it. Every cell, every organism, tends to survive, as an individual, as a species. Injure it and it strives for survival according to the seriousness of the injury. We accidentals have been maimed and mutilated almost past belief.

"Our organisms had the assistance of medical science. *Real* medical science. Blood was supplied as long as we needed it, machines did all our breathing, kidneys were replaced, hearts furnished, glandular products supplied in the exact quantities necessary, nervous and muscular systems were regenerated. In the extremity of our organic struggle, because we had the proper treatment, our bodies were wiped virtually free of death."

Sweat ran down his face. He longed for hands to wipe it away.

"Most accidentals are nearly immortal. Not quite—we'll die four or five hundred years from now. Meanwhile, there is no reason why we can't leave the Solar System. Rockets are slow; you would die before you got back from Alpha Centauri. We won't. Time doesn't matter to us.

"Perhaps better, faster rockets will be devised after we leave. You may get to there long before we do. We won't mind. We will simply have made our contribution to progress as best we could, and that will satisfy us."

With an effort Docchi smiled. The instant he did, he felt it was a mistake, one that he couldn't rectify. Even to himself it felt more like a snarl.

"You know where we're kept. That's a politer word than imprisoned. We don't call it Handicap Haven; our name for it is the *junkpile*. And to ourselves we're junkmen. Does this give you a clue to how we feel?

"I don't know what you'll have to do to force the Medicouncil to grant their permission. We appeal to you as our last resort. We have tried all other ways and failed. Our future as human be-

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ings is at stake. Whether we get what we want and need is something for you to settle with your conscience."

He nudged the switch and sat down.

His face was gray.

"I don't like to bother you," said Jordan, "but what shall we do about them?"

Docchi glanced at the telecom. "They" were uncomfortably close and considerably more numerous than the last time he had looked.

"Take evasive action," he said wearily. "Swing close to Earth and use the planet's gravity to give us a good push. We've got to keep out of their hands until people have time to react."

"I think you ought to know—" began Cameron. There was an odd tone to his voice.

"Save it for later," said Docchi. "I'm going to sleep." His body sagged. "Jordan, wake me up if anything important happens. And remember that you don't have to listen to this fellow unless you want to."

Jordan nodded and touched the controls. Nona, leaning against the gravital panel, paid no attention to the scene. She seemed to be listening to something nobody else could hear. That was nothing new, but it broke Docchi's heart whenever he saw it. His breath drew in almost with a sob as he left the control room.

THE race went on. Backdrop: planets, stars, darkness. The little flecks of light that edged nearer didn't seem cheerful to Jordan. His lips were fixed in a straight, hard line. He could hear Docchi come in behind him.

"Nice speech," said Cameron.

"Yeah." Docchi glanced at the telecom. The view didn't inspire further comment.

"That's the trouble, it was just a speech. It didn't do you any good. My advice is to give up before you get hurt."

"It would be."

Cameron stood at the threshold. "I may as well tell you," he said reluctantly. "I tried to before the broadcast, as soon as I found out what you were going to do. But you wouldn't listen."

He came into the control compartment. Nona was huddled in a seat, motionless, expressionless. Anti was absent.

"You know why the Medicouncil refused to let you go?"

"Sure," said Docchi.

"The general metabolism of accidentals is further from normal than that of creatures we dredge from the bottom of the sea. Add to that an enormously elongated life span and you ought to see the Medicouncil's objection."

"Get to the point!"

"Look at it this way," Cameron continued almost desper-

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ately. "The Centauri group contains quite a few planets. From what we know of cosmology, intelligent life probably exists there to a greater or lesser extent. You will be our representatives to them. What *they* look like isn't important; it's their concern. But our ambassadors have to meet certain minimum standards. They at least—damn it, don't you see that they at least have to *look* like human beings?"

"I know you feel that way," said Jordan, rigid with contempt.

"I'm not talking for myself," Cameron said. "I'm a doctor. The medicouncilors are doctors. We graft on or regenerate legs and arms and eyes. We work with blood and bones and intestines. We know what a thin borderline separates normal people from—from you.

"Don't you understand? They're perfect, perhaps too much so. They can't tolerate even small blemishes. They rush to us with things like hangnails, pimples, simple dandruff. Health—or rather the appearance of it—has become a fetish. They may think they're sympathetic to you, but what they actually feel is something else."

"What are you driving at?" whispered Docchi.

"Just this: if it were up to the Medicouncil, you would be on your way to the Centauri group. But it isn't. The decision always had to be referred back to the Solar System as a whole. And the Medicouncil can't go counter to the mass of public opinion."

Docchi turned away in loathing.

"Don't believe me," said Cameron. "You're not too far from Earth. Pick up the reaction to your broadcast."

Worriedly, Jordan looked at Docchi.

"We may as well find out," said Docchi. "It's settled now, one way or the other."

They searched band after band. The reaction was always the same. Obscure private citizen or prominent one, man or woman, they all told how sorry they were for the accidentals, but—

"Turn it off," said Docchi at last.

"Now what?" Jordan asked numbly.

"You have no choice," said the doctor.

"No choice," repeated Docchi dully. "No choice but to give up. We misjudged who our allies were."

"We knew you had," said Cameron. "It seemed better to let you go on thinking that way while you were on the asteroid. It gave you something to hope for. It made you feel you weren't alone. The trouble was that you got farther than we thought you

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would ever be able to."

"So we did," Docchi said. His lethargy seemed to lift a little. "And there's no reason to stop now. Jordan, pick up the ships behind us. Tell them we've got Cameron on board. A hostage. Play him up as a hero. Basically, he's not with those who are against us."

Anti came into the control compartment. Cheerfulness faded from her face. "What's the matter?" she asked.

"Jordan will explain to you. I've got to think."

Docchi closed his eyes. The ship lurched slightly, though the vibration from the rockets did not change. There was no reason for alarm; the flight of a ship was never completely steady. Docchi paid no attention.

At last he opened his eyes. "If we were properly fueled and provisioned," he said without much hope, "I would be in favor of the four of us heading for Alpha or Proxima. Maybe even Sirius. It wouldn't matter where, since we wouldn't intend to come back. But we can't make it with our small fuel reserve. If we can shake the ships behind us, we might be able to hide until we can steal the necessary fuel and food."

"What'll we do with Doc?" asked Jordan.

"We'd have to raid an unguarded outpost, of course. Probably a small mining asteroid. We can leave him there."

"Yeah," said Jordan. "A good idea, *if* we can run away from our personal escort of bloodhounds. Offhand, that doesn't seem very likely. They didn't come any closer when I told them we had Doc with us, but they didn't drop back—"

He stopped and raised his eyes to the telecom. He blinked, not believing what he saw.

"They're gone!" His voice broke with excitement.

Almost instantly Docchi was beside him. "No," he corrected. "They're still following, but they're very far behind." Even as he looked, the pursuing ships visibly lost ground.

"What's our relative speed?" asked Jordon. He looked at the dials himself, frowned, tapped them as if the needles had gone crazy.

"What did you do to the rockets?" demanded Docchi.

"Nothing! There wasn't a thing I *could* do. We were already running at top speed."

"We're above it. Way above it. How?"

There was nothing to explain their astonishing velocity. Cameron, Anti, and Jordan were in the control compartment. Nona still sat huddled up, hands pressed tight against her head.

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There was no explanation at all, yet power was pouring into the gravital unit, as a long unused, actually useless dial was indicating.

"The gravital drive is working," Docchi blankly pointed out.

"Nonsense," said Anti. "I don't feel any weight."

"You don't," answered Docchi. "You won't. The gravital unit was originally installed to drive the ship. When that proved unsatisfactory, it was converted. The difference is slight but important. An undirected general field produces weight effects inside the ship. That's for passenger comfort. A directed field, outside the ship, will drive it. You can have one or the other, not both."

"But I didn't turn on the gravital drive," said Jordan in flat bewilderment. "I couldn't if I wanted to. It's disconnected."

"I would agree with you, except for one thing. It's working." Docchi stared at Nona, whose eyes were closed. "Get her attention," he said.

It was Jordan who gently touched her shoulder. She opened her eyes. On the instrument board, the needle of a once useless dial rose and fell.

"What's the matter with the poor dear?" asked Anti. "She's shaking."

"Let her alone," said Docchi.

No one moved. No one said anything at all. Minutes passed while the ancient ship creaked and groaned and ran away from the fastest rockets in the Solar System.

"I think I know," said Docchi at last, still frowning. "Consider the gravity-generating plant. Part of it is an electronic computer, capable of making the necessary calculations and juggling the proportion of power required to produce, continuously, directed or undirected gravity. In other words, a brain, a complex mechanical intelligence. From the viewpoint of that intelligence, why should it perform *ad infinitum* a complicated but meaningless routine? It didn't know why, and because it didn't, very simply, it refused to do so.

"Now consider Nona. She's deaf, can't speak, can't communicate. In a way she's comparable to the gravital computer. Like it, she has a very high potential intelligence. Like it, she's had difficulty grasping the facts of her environment. Unlike it, though, she has learned something. How much, I don't know, but it's far more than the Medicouncil psychologists credit her with."

"Yeah," said Jordan dubiously. "But what's happening now?"

"If there were two humans involved, you would call it telepathy," answered Docchi hesitantly, fumbling for concepts he

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could only sense without grasping. "One intelligence is electronic, the other organic. You'll have to coin a new term, because the only one I know is extra-sensory perception, and that's obviously ridiculous. It is, isn't it?"

Jordan smiled and flexed his arms. Under the shapeless garment his muscles rippled. "It isn't," he said. "The power was there, but we're the only ones who know how to use it. Or rather Nona is."

"Power?" repeated Anti, rising majestically. "You can keep it. I want just enough to get to Centauri."

"I think you'll get it," Docchi promised. "A lot of things seem clearer now. For example, in the past, why didn't gravital units work well at considerable distances from the Sun? As a matter of fact, the efficiency of each unit was inversely proportional to the square of the distance between it and the Sun.

"The gravital computer is a deaf, blind, mass-sensitive brain. The major fact in its existence is the Sun, the greatest mass in the Solar System. To such a brain, leaving the Solar System would be like stepping off the edge of a flat world, because it couldn't be aware of stars.

"Now that it knows about the Galaxy, the drive will work anywhere. With Nona to direct it, even Sirius isn't far away."

"Doc," said Jordan carelessly, "you'd better be figuring a way to get off the ship. Remember, we're going faster than man ever went before." He chuckled. "Unless, of course, you *like* our company and don't want to leave."

"We've got to do some figuring ourselves," interposed Docchi. "Such as where we are heading now."

"A good idea," said Jordan. He busied himself with charts and calculations. Gradually his flying fingers slowed. His head bent low over his work. At last he stopped and folded his arms.

"Where?" asked Docchi.

"There." Jordan dully punched the telecom selector and a view became fixed on the screen. In the center glimmered a tiny world, a fragment of a long-exploded planet. Their destination was easily recognizable.

It was Handicap Haven.

"But why do we want to go there?" asked Anti. She looked in amazement at Docchi.

"We're not going voluntarily," he answered, his voice flat and spent. "We're going where the Medicouncil wants us to go. We forgot about the monitor system. When Nona activated the gravital unit, that fact was indicated at some central station. All the Medicouncil had to do was use

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the monitor to take the gravital drive away from Nona."

"We thought we were running away from the ships, which we were, but only to beat them back to the junkpile?" asked Anti.

Docchi nodded.

"Well, it's over. We did our best. There's no use crying about it." Yet she was. She passed by Nona, patting her gently. "It's all right, darling. You tried."

Jordan followed her from the compartment.

Cameron remained; he came over to Docchi. "Everything isn't lost," he said, somewhat awkwardly. "You're back where you started from, but Nona at least will benefit."

"Benefit?" said Docchi. "Someone will. It won't be Nona."

"You're wrong. Now that she is an important factor—"

"So is a special experimental machine. Very valuable. I don't think she'll like that classification."

Silence met silence. It was Dr. Cameron who turned away.

"That ghastly glow of yours when you're angry always did upset me. I'll come back when it's dimmer."

Docchi glared after him. Cameron was the only normal aware that it was Nona who controlled the gravital unit. All the outside world could realize was that it was in operation, as it had been designed to work, but never had. If Cameron could be disposed of—

He shook his head. It wouldn't solve anything. He might fool them for a while. They might think he was responsible. In the end, they'd find out. Nona wasn't capable of that much deception, for she never knew what a test was.

He went over to her. Once he had hoped . . . It didn't matter what he had hoped.

She looked up and smiled. She had a right to. No word had ever broken the silence of her mind, but now she was communicating with something, whatever it was that an electronic brain could say. Of course she didn't understand that the conversation was taking place between two captives, herself and the gravital computer.

Abruptly he turned away. He stopped at the telecom panel and methodically kicked it apart. Delicate tubes smashed into powder. The emergency radio he thoroughly demolished.

The ship was firmly in the grip of the gravital monitor. There was nothing he could do about that. All that remained was to protect Nona from their prying minds as long as he could.

She didn't hear the noise, or didn't care. She sat there, head in her hands, calm and smiling.

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THE outer shell of the rocket dome opened before and closed behind them. Jordan set the controls in neutral and lifted his hands, muttering to himself. They were gliding through the lip of the inner shell. Home.

"Cheer up," said Cameron breezily. "You're not really prisoners, you know."

Nona seemed content, though Jordan didn't. Docchi said nothing, the light gone from his face. Anti wasn't with them; she was floating in the tank of acid. The gravity field of the asteroid made that necessary.

The ship scraped gently and they were down. Jordan touched a lever; passenger and freight locks were open.

"Let's go," said Dr. Cameron. "I imagine there's a reception committee for you."

There was. The little rocket dome held more ships than normally came in a year. The precise confusion of military discipline was everywhere in evidence. Armed guards lined either side of the landing ramp down which they walked.

At the bottom, a large telecom unit had been set up. If size indicated anything, someone considered this an important occasion. From the screen, larger than life, Medicouncilor Thorton looked out approvingly.

The procession from the ship halted in front of the telecom unit.

"A good job, Dr. Cameron," said the medicouncilor. "We were quite surprised at the escape of the four accidentals, and your disappearance, which coincided with it. From what we were able to piece together, you deliberately followed them. A splendid example of quick thinking, Doctor. You deserve recognition for it."

"Thank you," said Cameron.

"I'm sorry I can't be there to congratulate you in person, but I will be soon." The medicouncilor paused discreetly. "At first the publicity was bad. Very bad. We thought it unwise to conceal an affair of such magnitude. Of course the unauthorized broadcast made it impossible. Fortunately, the gravital discovery came along at just the right time. I don't mind telling you that the net effect is now in our favor."

"I hoped it would be," said Cameron. "Nona—"

"You've spoken about her before." The medicouncilor frowned. "We can discuss her later. For the moment, see that she and the rest of the accidentals are returned to their usual places. Bring Docchi to your office at once. I want to question him privately."

Cameron stared at him in bewilderment. "But I thought—"

"No objections, Doctor," snap-

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ped Thorton. "Important people are waiting for you. That is all." The telecom darkened.

"I think you heard what he said, Dr. Cameron." The officer at his side was very polite. He could afford to be, with the rank of three big planets on his tunic.

"Very well," Cameron answered. "But as commander of the asteroid, I request that you furnish a guard for the girl."

"Commander?" repeated the officer. "That's funny—my orders indicate that I am, until further notice. I haven't got that notice." He looked around at his men and crooked a finger. "Lieutenant, see that the little fellow—Jordan, I think his name is—gets a lift back to the main dome. And you can walk the pretty lady to her room. Or whatever it is she lives in." He smiled negligently at Cameron. "Anything to oblige another commander."

THE medicouncilor, Thorton, was waiting impatiently on the telecom when they got to Cameron's office.

"We will arrive in about two hours," he said immediately. "When I say we, I mean a number of top governmental officials and scientists. Meanwhile, let's get on with this gravital business." He caught sight of the commander. "General Judd, this is a technical matter. I don't think you'll be interested in it."

"Very well, sir. I'll stand guard outside."

The medicouncilor was silent until the door closed behind General Judd. "Sit down, Docchi," he said with unexpected kindness. He paused to note the effect. "I can sympathize with you. You had everything you wanted nearly within your reach. And, after that, to return to Handicap Haven—well, I can understand how you feel. But since you did return, I think we can arrange to do something for you."

Docchi stared at the man on the screen. A spot of light pulsed on his cheek and then flared rapidly over his face.

"Sure," he said casually. "But there are criminal charges against me."

"A formality," said the medicouncilor. "With a thing like the discovery—or rediscovery—of the gravital drive to think about, no one is going to worry much about your unauthorized departure from the asteroid."

Medicouncilor Thorton sounded pleased. "I don't want to mislead you. We can't do any more for you medically than has already been done. However, you will find yourself the center of a more adequate social life. Friends, work, whatever you want. Naturally, in return for this, we will expect your full cooperation."

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"Naturally." Docchi blinked at him and got to his feet. "Sounds interesting. I'd like to think about it for a minute."

Cameron planted himself squarely in front of the screen. "Maybe I don't understand. I think you've got the wrong person."

"Dr. Cameron!" Thorton glowered. "Please explain."

"It was an easy mistake to make," said Cameron. "Cut off from communication, the gravital drive began to work. How? Why? Mostly, who did it? You knew it wasn't I. I'm a doctor, not a physicist. Nor Jordan, he's at best a mechanic. Therefore it had to be Docchi, because he's an engineer. He could make it work. But it wasn't Docchi. He had nothing to do with—"

"Look out!" cried Thorton too late.

Cameron fell to his knees. The same foot that brought him down crashed into his chin. His head snapped back and he sprawled on the floor. Blood trickled from his face.

"Docchi!" shouted Thorton from the screen.

Docchi didn't answer. He was crashing through the door. The commander was lounging against the wall. Head down, Docchi ran into him. The toaster fell from his belt to the floor. With scarcely a pause, Docchi stamped on it and continued running.

The commander got to his feet and retrieved the weapon. He aimed it tentatively at the retreating figure; a thought occurred to him and he lowered it. He examined the damaged mechanism. After that, it went gingerly into a tunic pocket.

Muffled shouts were coming from Cameron's office. The general broke in.

The medicouncilor glared at him from the screen. "I can see that you let him get away."

The disheveled officer straightened his uniform. "I'm sorry, sir. I'll alert the guards immediately."

"Never mind now. Revive that man."

The general wasn't accustomed to giving resuscitation; it was out of his line. Nevertheless, in a few minutes Cameron was conscious, though somewhat dazed.

"Now then, Doctor, if it wasn't Docchi who was responsible for the sudden functioning of the gravital drive, who was it?"

With satisfaction, Cameron told him. He had not been wrong about the girl. Listening to the detailed explanation of Nona's mental abilities, the general was perplexed, as generals sometimes are.

"I see." The medicouncilor nodded. "We overlooked that possibility altogether. Not the mechanical genius of an engineer.

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Instead, the strange telepathic sense of a girl. That puts the problem in a different light."

"It does." Cameron pressed his aching jaw. "She can't tell us how she does it. We'll have to experiment. Fortunately, it won't involve any danger. With the monitor system we can always control the gravital drive."

The medicouncilor leaned perilously backward and shook his head. "You're wrong. It's supposed to, but it doesn't. We tried. For a microsecond, the monitor did take over, but the gravital computer is smarter than we thought, if it *was* the computer that figured out the method. It found a way of cutting the power from the monitor circuit. It didn't respond at all."

Cameron forgot his jaw. "If you didn't bring the rocket back on remote, why did she come?"

"Docchi knows," growled the medicouncilor. "He found out in this room. That's why he escaped." He tapped on his desk with blunt fingers. "She could have taken the ship anywhere she pleased and we couldn't have stopped her. Since she voluntarily came back, it's obvious that she wants the asteroid!"

Medicouncilor Thorton tried to shove his face out of the screen and into the room. "Don't you ever think, General? There isn't any real difference between gravital units except size and power. What she did to the ship she can do as easily to the asteroid." He thrust out a finger and pointed angrily. "Don't stand there, General Judd. Find that girl!"

It was late for that kind of command. The great dome overhead trembled and creaked in countless joints. The little world shivered, groaned as if it had lain too long in an age-old orbit. It began to move.

VAGUE shapes stirred, crawled, walked if they could. Fantastic and near-fantastic figures came to the assembly. Huge or tiny, on their own legs or borrowed ones, they arrived, with or without arms, faces. The word had spread by voice, by moving lips, by sign languages of every sort.

"Remember, it will be hours or perhaps days before we're safe," said Docchi. His voice was growing hoarse. "It's up to us to see that Nona has all the time she needs."

"Where is she hiding?" asked someone from the crowd.

"I don't know. If I did, I still wouldn't tell you. It's our job to keep them from finding her."

"How?" demanded one near the front. "Fight the guards?"

"Not directly," said Docchi. "We have no arms in the sense of weapons. Many of us have no

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arms in any sense. All we can hope to do is obstruct their search. Unless someone has a better idea, this is what I plan:

"I want all the men, older women, and the younger ones who aren't suitable for reasons I'll explain later. The guards won't be here for another half hour—it will take that long to get them together and give them the orders that the Medicouncil must be working out now. When they do come, get in their way.

"How you do that, I'll leave to your imagination. Appeal to their sympathy as long as they have any. Put yourself in dangerous situations. They have ethics; at first they'll be inclined to help you. When they do, try to steal their weapons. Avoid physical violence as much as you can. We don't want to force them into retaliation. Make the most of that phase of their behavior. It won't last long."

Docchi paused and looked over the crowd. "Each of you will have to decide for himself when to drop that kind of resistance and start an active battle campaign. We have to disrupt the light and scanning and ventilation systems, for instance. They'll be forced to keep them in repair. Perhaps they'll try to guard these strategic points. So much the better for us—there will be fewer guards to contend with."

"What about me?" called a woman from far in back. "What do I do?"

"You are in for a rough time," Docchi promised her. "Is Jerian here?"

She elbowed her way to his side through the crowd.

"Jerian," said Docchi to the accidentals, "is a normal, pretty woman — outwardly. She has, however, no trace of a digestive system. The maximum time she can go without food and fluid injections is ten hours. That's why she's here."

Again Docchi scanned the group. "I need a cosmetech, someone who has her equipment with her."

A legless woman propelled herself forward. Docchi conferred with her. She seemed startled, but she complied. Under her deft fingers Jerian was transformed—into Nona.

"She will be the first Nona they'll find," explained Docchi, "because she can get away with the disguise longer. I think—I hope—they'll call off the search for a few hours while they test her. Eventually they are sure to find out. In Jerian's case, fingerprints or X-rays would reveal who she is. But that won't occur to them immediately. Nona is impossible to question, as you know, and Jerian will act exactly as Nona would.

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"As soon as they discover that Jerian isn't Nona — well, they won't bother to be polite, if that's the word for it. The guards will like the idea of finding an attractive girl they can manhandle in the line of duty, especially if they think that will help them find Nona. It won't, of course. But it will hold up the search and that's what we want."

They stood still, no one moving. Women looked at each other in silent apprehension.

"Let's go," said Jordan grimly.

"Wait," advised Docchi. "I have one volunteer Nona. I need about fifty more. It doesn't matter if you're physically sound or not—we'll raid the lab for plastissue. If you think you can be made up to look like Nona, come forward."

Slowly, singly and by twos and threes, they came to him. There were few indeed who wouldn't require liberal use of camouflage.

The rest followed Jordan out.

Mass production of an individual. Not perfect in every instance. Good enough to pass in most. Docchi watched approvingly, suggesting occasional touches of makeup.

"She can't speak or hear," he reminded the volunteers. "Remember that at all times, no matter what they do. Hide in difficult places. After Jerian is taken and the search called off and then

resumed, let yourselves be found one at a time. Every guard that has to take you for examination is one less to look for the real Nona. They have to find her soon or get off the asteroid."

The cosmetechs were busy; none stopped. There was one who looked up.

"Get off?" she asked. "Why?"

"The Sun is getting smaller."

"Smaller!" exclaimed the woman.

He nodded. "Handicap Haven is leaving the Solar System."

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Her fingers flew and molded the beautiful curve of a jaw where there had been none. Next, plastissue lips were applied.

Nona was soon hiding in half a hundred places.

And one more . . .

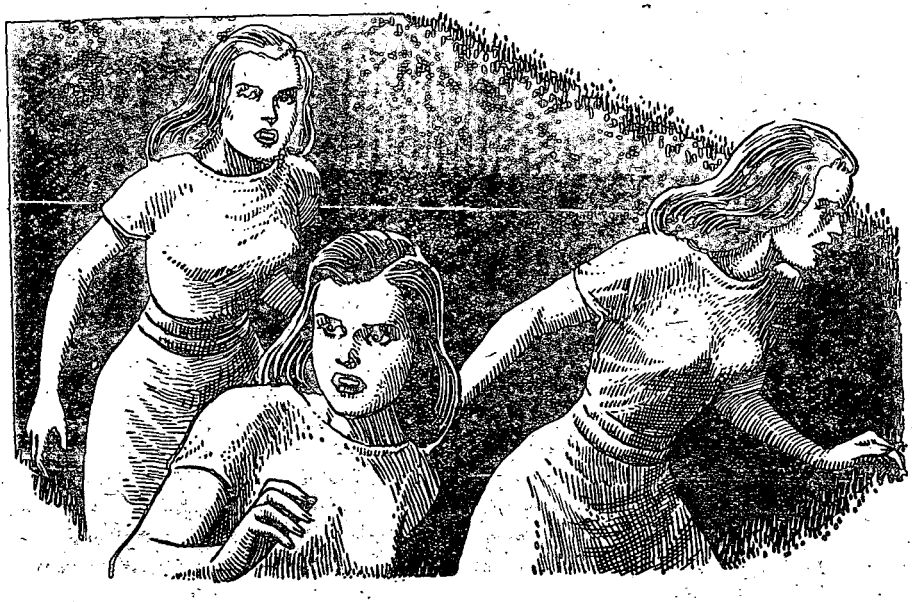
THE orbit of Neptune was far behind and still the asteroid was accelerating. Two giant gravital units strained at the core of Handicap Haven. The third clamped an abnormally heavy gravity on the isolated world. Prolonged physical exertion was awkward and doubly exhausting. Hours turned into a day, but the units never faltered.

"Have you figured it out as precisely as you should?" asked Docchi easily. "You share our velocity away from the Sun. You'll have to overcome it before you can start going back."

The general ignored him. "If we could only turn off that damned drive!"

Engineer Vogel shrugged sickly. "You try it," he suggested. "I don't want to be around when you do. It sounds easy: just a gravital unit. But remember there's a good-sized nuclear pile involved."

"I know we can't," admitted the general, morosely looking at the darkness overhead. "On the



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other hand, we can take off and blow this rock apart from a safe distance."

"And lose all hope of finding her?" taunted Docchi.

"We're losing her anyway," Cameron commented sourly.

"It's not as bad as all that," consoled Docchi. "Now that you know where the difficulty is, you can always build another computer and furnish it with auxiliary senses. Or maybe build into it the facts of elementary astronomy."

Cautiously, he shifted his frail body under the heavy gravity. "There's another solution, though it may not appeal to you. I can't believe Nona is altogether unique. There must be others like her. So-called 'born' mechanics, maybe, whose understanding of machinery is a form of empathy we've never suspected. Look hard enough and you may find them, perhaps in the most unlikely or unlovely body."

General Judd grunted wearily, "If I thought you knew where she is—"

"You can try to find out," Docchi invited, glowing involuntarily.

"Forget about the dramatics, General," said Cameron in disgust. "We've questioned him thoroughly. Resistance we would have had in any event. He's responsible merely for making it more effective than we thought possible."

He added slowly: "At the moment, obviously, he's trying to tear down our morale. He doesn't have to bother. The situation is so bad that it looks hopeless. I can't think of a thing we can do that would help us."

The Sun was high in the center of the dome. Sun? More like a very bright star. It cast no shadows; the lights in the dome did. They flickered and with monotonous regularity went out again. The general swore constantly and emotionlessly until service was restored.

A guard approach with his captive. "I think I've found her, sir."

Cameron looked at the girl in dismay. "Guard, where's your decency?"

"Orders, sir," the man said.

"Whose orders?"

"Yours, sir. You said she was sound of body. How else could I find out?"

Cameron scowled and thrust a scalpel deep into the girl's thigh. She looked at him with a tear-stained face, but didn't move a muscle.

"Plastissue, as any fool can see," he commented dourly.

The guard looked revolted and started to lead her out.

"Let her go," snapped the doctor. "Both of you will be safer, I think."

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The girl darted away. The guard followed her, shuddering, his eyes filled with a self-loathing that Cameron realized would require hours of psychiatric work to remove.

Docchi smiled. "I have a request to make."

"Go ahead and make it," snorted the general. "We're likely to give you anything you want."

"You probably will. You're going to leave without her. Very soon. When you do go, don't take all your ships. We'll need about three when we come to another solar system."

General Judd opened his mouth in rage.

"Don't you say anything you'll regret," cautioned Docchi. "When you get back, what will you report to your superiors? Can you tell them that you left in good order, while there was still time to continue the search? Or will they like it better if they know you stayed until the last moment? So late that you had to abandon some of your ships?"

The general closed his mouth and stamped away. Wordlessly, Cameron dragged after him.

THE last ship had blasted off and the rocket trails had faded into overwhelming darkness. The Sun, which had been trying to lose itself among the other stars, finally succeeded. The asteroid

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was no longer the junkpile. It was a small world that had become a swift ship.

"We can survive," said Docchi. "Power and oxygen, we have, and we can grow or synthesize our food."

He sat beside Anti's tank, which had been returned to the usual place. A small tree nodded overhead in the artificial breeze. It was peaceful enough. But Nona wasn't there.

"We'll get you out of the tank," promised Jordan. "When she comes back, we'll rig up a place where there's no gravity. And we'll continue cold treatment."

"I can wait," said Anti. "On this world, I'm normal."

Docchi stared forlornly about. The one thing he wanted to see wasn't there.

"If you're worrying about Nona," advised Anti, "don't. The guards were pretty rough with the women, but plastissue doesn't feel pain. They didn't find her."

"How do you know?"

"Listen," said Anti. The ground shivered with the power of the gravital units. "As long as they're running, how can you doubt?"

"If I could be sure—"

"You can start now," Jordan said. "First, though, you'd better get up and turn around."

Docchi scrambled to his feet. She was coming toward him.

She showed no sign of strain. Except for a slight smudge on her wonderfully smooth and scarless cheek, she might just have stepped out of a beauty cubicle. Without question, she was the most beautiful woman in the world. This world, of course, though she could have done well on any world—if she could have communicated with people as well as with machines.

"Where were you hiding?" Docchi asked, expecting no answer.

She smiled. He wondered, with a feeling of helplessness, if machines could sense and appreciate her lovely smile, or whether they could somehow smile themselves.

"I wish I could take you in my arms," he said bitterly.

"It's not as silly as you think," said Anti, watching from the surface of the tank. "You don't have any arms, but she has two. You can talk and hear, but she can't. Between you, you're a complete couple."

"Except that she would never get the idea," he answered unhappily.

Jordan, rocking on his hands, looked up quizzically. "I must be something like her. They used to call me a born mechanic; just put a wrench in my hand and I can do anything with a piece of machinery. It's as if I sense what the machine wants done to it. Not to the extent that Nona can

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understand, naturally. You might say it's reversed, that she's the one who can hear while I have to lip-read."

"You never just gabble," Docchi prompted. "You have something in mind."

Jordan hesitated. "I don't know if it's stupid or what. I was thinking of a kind of sign language with machines. You know, start with the simple ones, like clocks and such, and see what they mean to her. Since they'd be basic machines, she'd probably have pretty basic reactions. Then it's just a matter of—"

"You don't have to blueprint it," Docchi cut in excitedly. "That would be fine for determining elementary reactions, but I can't carry around a machine shop; it wouldn't be practical. There ought to be one variable machine that would be portable and yet convey all meanings to her."

"An electronic oscillator?"

Acid waves washed at the sides of the tank as Anti stirred impatiently. "Will you two great brains work it out in the lab, please? And when you get through with that problem, you'll have plenty more to keep you occupied until we get to the stars. Jordan and me, for instance. What future is there for a girl unless she can get married?"

"That's right," Docchi said. "I've got an idea we can do better than normal doctors. Being accidentals ourselves, we won't stop experimenting till we succeed. And we have hundreds of years to do it in."

Glowing, literally, with pleasure, he bent over for Jordan to climb on his back. Then he kissed Nona and headed for the laboratory.

Nona smiled and followed.

"There are some things you don't need words or machines to express," Anti called out. "Keep that in mind, will you?"

She submerged contentedly in the acid bath. Above the dome, the stars gleamed a bright welcome to the little world that flashed through interstellar space.

—F. L. WALLACE

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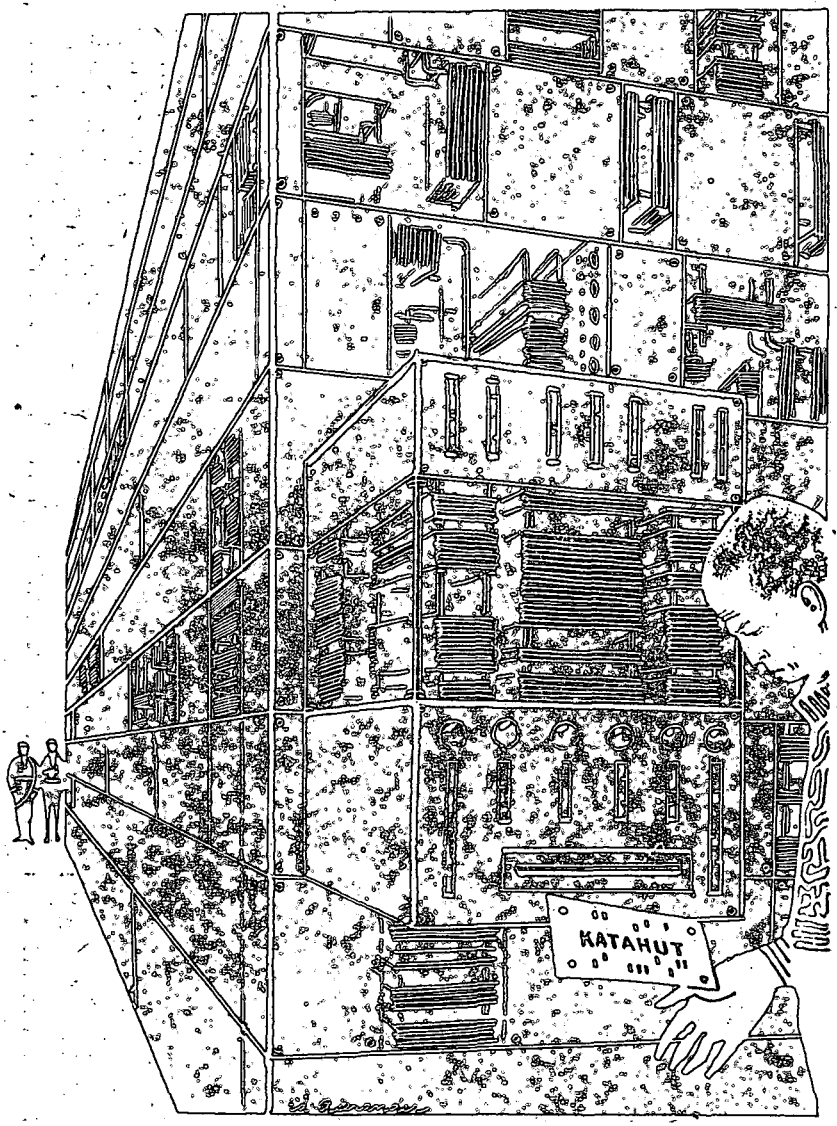

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Katahut Said No

By J. T. M'INTOSH

When the machine ordered any course of action, the answer was always yes. Except when—

Illustrated by ED ALEXANDER

ON Earth a town died. Its name was Katahut.

But Katahut was on Venus 25 million miles away.

It was like Koko's story to the Mikado. When Economics Center said, "Let a thing be done," it was as good as done—practically, it *was* done. When EC said a town must die, the town was as good as dead—practically, it *was* dead—so why not say so?

At New York EC headquarters, thousands of little cards had run upright along tiny, shining runways. Each card was a town. The

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machine which shuffled and dealt them, sent them on fresh journeys on the steel runways, or rejected them and shot them back the way they had come, was not strictly an electronic brain. It was rather a vast filing system, capable of selecting the one relevant fact among millions of facts. True, an electronic brain was in circuit, directing the operation, but the brain treated the conclusions of the selector as sacred, questioning nothing. "You do your job," it told the selector, in effect, "and I'll do mine."

Lights acted on cells across the little runways, modified by holes or cuts in the cards passing through. The selector worked for a long time, but wasted none of it. The hundreds of cards that started were at once decimated. Those which remained were run again and again, a little more being taken into consideration each time. Rejection became slower and slower. Sometimes the thirty or so cards left would complete the run without any being eliminated. But the selector always had something else to try.

When there were eleven cards left, each was a perfectly good solution to the problem fed to the selector. But no one would ever know that. No one would ever ask.

The selector had its orders. It wasn't a batch of eleven cards that was wanted; it was one—one card representing a town that best fitted EC requirements. The selector, in trouble, applied to the electronic brain for guidance.

The brain pondered unemotionally and came up with the answer that, other things being equal, it would be best to select the town with the smallest population.

Within four seconds a card was shot into a wire basket in the Coordinator's office. He picked it up and read the only word printed on it—the name of the town.

"Good God!" he said, aghast. "Katahut! Who would have thought it?"

From that moment Katahut was as good as dead.

THE Katahutans heard it on the radio, saw it on the television screens, read it in the newspapers, were told about it by their neighbors, and then went to the city officials to see if it was true.

The mayor was in a bad position, and no one knew it better than he did. On the one hand he had lost his office, his town and his home and might never be a mayor again. On the other, as a representative of government and law and order, he had to make sure that his people understood and obeyed the order without obstinacy or defiance. And all he had to say to them was what they

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knew already. Being a politician, he cursed the stupidity of EC for not leaving him some tiny crumb of reassurance to give. When your house is burned to the ground, it's nice to learn afterward that your wife has had the car out. If EC had allowed him to tell his people about the compensation arrangements, say . . . .

But they hadn't. They left him to say in words of one syllable what EC had said in officialese.

"It is necessary for the economic stability of Venus—" he said, then realized he had quoted direct from the official notice. He went one step higher on the pseudo-Greek facade of the city hall. The crowd was growing in a way he didn't like. He would soon be a solitary man shouting vainly over the heads of people who didn't intend to do anything hostile, perhaps, but could relieve their feelings by making him look silly.

"Look, people," he said. "They aren't evacuating Katahut for fun. There would be chaos if they left things as they are. Yes, chaos!" he exclaimed, forcing himself to warm up. "Costs in colonies are high, because so much still has to come from Earth. Venus has much of what we need, but not enough. There are too many small towns on the planet. Too much transport is necessary. A careful economic calculation has shown that we are one town over the critical figure for the economic survival of Venus—"

"We have heard all that, Robert," said ex-mayor Hank Todd.

It was more than an interruption. It brought Mayor Henrison to a dead stop. Henrison was over fifty, but he always felt like a small boy before old Hank. He couldn't stop Hank from calling him Robert. He couldn't even try. It would make him look silly, particularly since everyone called Hank Hank.

"What have you to say, if anything," Hank asked, "that isn't in the EC statement?"

There was the rub. Henrison looked helplessly down at the tall, thin old man who had been mayor before him and who might have had this job instead of him. What would Hank have done? What was there for anyone to do?

Henrison was no shirker. He made a valiant try.

"No, I've nothing new to say," he admitted. "But what most of you want to know is what the EC statement means. You should know, Hank. But there must be others still wondering. Thinking, perhaps, that it isn't really necessary for us all to pack up and go somewhere else. That Economic Center is making a mountain out of a molehill. I can tell them, at least, that that isn't so. Statistics isn't a game any more,

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with mathematicians amusing themselves by working out how far such-and-such would stretch if piled end to end, or how many times people yawned in their life. It's a way of getting a clear warning of trouble ahead.

"Without statistics we'd have gone on developing Venus, until gradually we saw there was something wrong with the works, tried to correct it and couldn't. We'd probably never know that all that was wrong was that there was one small town too many on the planet, and that if we'd evacuate it, shut it up and dismantled it, the colony would never have failed."

Hank seemed to have appointed himself spokesman. Nobody disputed it. Hank was still a good man and he had the right kind of experience. He wasn't afraid to give a lead, which was what everyone wanted — even Henrison, if the puzzled, vexed people in front of him would only realize it.

"You trust these statistics, Robert?" Hank asked.

"Certainly I do. A doctor gives you a drug that may be poison. You may even know it's poison. *You* don't know that it'll help you to take it. You have to take his word for it. I'm no statistician, Hank, any more than you are, but I'm ready to believe the answers."

"The answers of a mechanical brain."

Henrison knew the value of demonstration. He pulled out a small calculating machine. He pressed the buttons. "Twelve to the power of five is 248832," he said. "That's not a difficult calculation. You can work it out on the back of an envelope in a few seconds. And when you do, you find it's right. After a bit you don't check the answers any more. You just check the machine every now and then, which the technicians do, of course. I think we can trust the answer, Hank."

Hank said nothing, thinking. There was suddenly dead silence. In the curious emphatic way of crowds, everyone knew that a decision would be made and their course set in the next few seconds. It might be Hank's way, it might be Henrison's, it might be something quite different.

"I think," said Hank quietly, "that a town, like an individual, has a right to live."

The crowd cheered that wildly, as if it were a long, brilliant and impassioned speech. It was the first hint that someone thought the EC ruling needn't be final. No one wanted to be the first to suggest that there should be any resistance to the ruling. Perhaps even Hank himself needed that cheer before he took any definite

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step or made any decision.

Having heard it, he turned and faced the crowd.

"I'm going to the EC depot at Cannap," he said. "Anyone coming with me?"

WHY the Coordinator on Earth had been aghast when the name of Katahut came out of the selector was that Katahut was perhaps the only small town on Venus which he knew by name. It had been the first settlement on Venus, founded fifty years before. It had not been developed much, and it had not grown, because it was only by chance that the first ship had landed there. Otherwise the site had little to commend it. It was not on a river. There were no iron or coal deposits near by. The soil, for Venus, was not particularly good. It had been used as a base, no more, and the big and important towns had sprung up elsewhere.

Now it wasn't even a base. Cannap was the capital, Regis the main spaceport, Harun the great supply base, Cornfield the industrial center. There was no economic reason for Katahut to exist. So after the first mild shock —for the name of Katahut was taught in schools—everyone saw that the natural choice, if a town had to be eliminated, was Katahut. They forgot, perhaps, that there were other small towns on Venus which served as little purpose as Katahut and had no historical significance. It didn't occur to them that the Katahutans had any genuine complaint. Many cities on Earth had been evacuated. It was wasteful to let towns for which there was no real purpose die a slow and painful economic death.

Indeed, most people had come to accept the benevolent rule of Economic Center, which gave them more leisure and put more money in their pockets to spend, to such an extent that it was almost taken for granted that everyone, everywhere, had done the same thing. Perhaps EC was a little abrupt with Katahut. At one time, before such a step was taken, there had been cautious, psychologically correct preparation. The people in a town to be evacuated—all on Earth, so far, apart from two on Mars which evacuated themselves — were shown the advantages of the decision, given plenty of time, encouraged for a while to move between their old place of residence and the new, and helped in every way.

But that hadn't been necessary lately. The redistribution of population was only a tiny part of the concerns of EC and didn't get much publicity. Occasionally, a particularly picturesque evacuation would rate an illustrated ar-

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ticle in the photographic magazines. The exacuation of a town with no economic purpose, as a rule, was worth only three or four lines in the newspapers which didn't cover that area.

Katahut, of course, would rate much more than that, even on Mars. Most of the news value of the evacuation would be in its name and history, some in the fact that it was the first Venusian town to be affected, with a good bit of propaganda because it was the only economic adjustment necessary on Venus, according to the EC survey.

Later, naturally, it was pointed out with heat, irony, amusement and cool disdain that one simple question to an electronic brain fed with all the data would have shown exactly what would happen. That was the trouble with cybernetics. It wasn't merely that the data had to be correct and complete. It was not enough that the right questions should be asked.

All the right questions had to be asked.

And no one thought of asking: "Suppose Katahut raises such a row that the whole question of compulsory evacuation has to be reviewed?"

Others, of course, said an electronic brain wasn't necessary for that. Common sense ought to have shown EC enough to prevent the mistake.

Everyone, as usual, was very good at shutting the stable door after the horse had bolted.

HANK hadn't been allowed to bring anyone in with him. The EC chief at Cannap was quite prepared to see him, give him a drink and have a friendly chat, but as Hank was obviously the man who mattered in Katahut's mild revolt against EC—like a rabbit trying to push a ten-ton truck off its front door—it would be far better to deal with him direct, without giving him the advantage of a sympathetic audience.

"You want to be satisfied that this step is necessary, Mr. Todd," the EC local chief said. "Very natural. It may seem to you, an intelligent but untrained man, that some other method would get the same results, or that the selector on Earth didn't know its job.

"What we work for, Mr. Todd, is balance. Only a balanced economy can be a healthy economy. Now Venusian development is held back at the moment by settlements which are moribund but refuse to die. Katahut, for example. You may think your town pays its way. In a sense it does, but only at the expense of the rest of Venus. As you know, we long ago adopted a policy of

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equalization of freight charges on Venus, so that everything you buy in Katahut costs exactly what it costs anywhere else on the planet. I won't go into the reasons for this, but we don't have to argue about that, do we? Now the existence of Katahut—"

"That," said Hank, "is exactly the point. I was wondering when you'd get to it."

The EC chief raised his eyebrows at this rustic bluntness.

"I didn't want to interrupt," said Hank, "but the very first step was wrong. I don't want to be satisfied that this step is necessary. I'm not going to argue on the lines of 'necessary to whom or to what?' Suppose you came to me and told me my death was necessary to the survival of the human race. I'd still want to live."

The EC man smiled coldly. "This is hardly a question of life or death, Mr. Todd."

"No, it's a question of liberty, which is often more important than life or death. And don't sigh and think 'fanatic' to yourself, either. We've got a nice little town which suits me and a lot of other people. The soil may not grow orchids, but it suits my truck garden. We've got a mayor who is honest and isn't a fool. The preacher says the kind of things we like to hear on Sundays. We live in a place that we and our fathers built.

"Maybe you can give me another place where I can grow vegetables and where there's a good mayor and a good preacher. But you can't give me Ted Jacobs next door and Cuan O'Farrell up the street and Bill Houliston on the other side of town when I want a good argument. Look, Mr. EC Chief, suppose all you say is true—what do we owe Venus? We came here and made our beds and you won't let us lie on them. We didn't develop away from you; *you* developed away from *us*. That's your funeral, not ours."

"Mr. Todd, I hope you're not going to say that science—"

But Hank was properly wound up by this time. "I'm not going to say anything about science and neither are you. I don't know what you were going to say, but it wasn't about science; it was about gadgetry. A metal brain said we had to shift. What has that to do with science? The brain only said the kind of thing you built it to say. You could have done the same thing without any machines, by making tables instead. Read down the columns and then across and finally you prove that x is equal to x. EC is playing with a toy, Mr. EC Chief, like a new watch.

"A watch and an electronic brain tell you what you make them tell you. Does the brain on

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Earth know anything about my cucumbers? Does it know Cuan O'Farrell? When it does, I'll be pleased to meet it. Until then, I don't see why I should let it run my life."

Hank was entirely wrong and the EC chief told him so. But Hank had been a local politician for thirty years, so he didn't stay on one subject long enough to be nailed down. He didn't know exactly what he was trying to do. He only knew that whenever there was an opening, he would try to squeeze through it.

And suddenly there it was.

"Of course, if it's the unanimous verdict of the people of Katahut that they want to remain where they are, as a community . . . " the EC chief hedged at last.

Hank pounced on it. "Yes? what then?"

"Why, we might find it possible to evacuate another similar town. Or make other similar adjustments as indicated by the cybernetics department."

Hank knew he had no time to think. To get the EC chief into a corner, he had had to go into it himself. He knew—none could know better—how difficult it was to get a unanimous verdict on anything which affected a lot of people in many different ways. But . . .

"Right," he said, rising. "I accept your conditions. Without reservations. I better leave now."

The EC man was put off stroke, wondering what conditions he had offered.

When Hank had gone, the chief got on the radiophone to Venus Space Station I to Earth Space Station III to EC headquarters, and asked for the Coordinator. He was no fool. He told the Coordinator coolly what had happened, knowing that he would make a much better impression that way than apologizing and excusing himself. He did. The Coordinator said nothing but, "Wait."

The Cannap chief waited for forty-five seconds. Then the Coordinator was back. "The electronic brain says there will be no unanimous verdict."

"Does the electronic brain," asked the Cannap chief irrelevantly, "know Hank Todd's cucumbers?"

It didn't, of course. There was no reason why it should.

NOT in any way was it the fault of the electronic brain. It had had insufficient data, many important things like Hank Todd's cucumbers being omitted. It didn't know Cuan O'Farrell and it didn't know Bill Houliston.

Curiously enough, Cuan O'Farrell was one of Hank's most obtrusive stumbling-blocks. He not only wouldn't sign the roll, he

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went round after Hank and old Bill persuading people to take their names off it.

"This," Hank told him grimly, "has got to stop."

"I agree," Cuan said cordially. "It's a lot of nonsense, and the sooner you stop making a fool of yourself, the better."

Hank talked for four hours without getting to first base. Then suddenly, as he was dozing off that night, he came awake with a shout, jumped out of bed and into his pants.

Cuan was already asleep and was even less prepared, when roused, to listen to reason than he had been that afternoon.

"You say," said Hank, "that it's no violation of freedom to split us up and send us to the four corners of Venus?"

"This afternoon I did," Cuan retorted, "and tomorrow I will again. Right now I want to sleep."

"You're a socialist, Cuan."

"Did you waken me up to tell me that? I've been a socialist for sixty-five years."

What Cuan meant by socialism was quite different from anything ever meant by the word before space travel began. But that was incidental.

"Suppose you were mayor, Cuan?"

Cuan came fully awake and looked shrewdly at Hank. He was suspicious, but interested.

"I'm not," he pointed out.

"No, but this is a question of liberty and the rights of man. Suppose you'd worked on this town for the fifty years of its existence and at last got yourself elected mayor. If they split up the town, all your work on socialism would have been wasted. You see that? You'd have to start in some other town, fifty years too late. Would that be right?"

Cuan looked at him unblinkingly for a while. Then he said: "No, it would not be right. You got that petition handy?"

Next to Cuan, Mary Brookshaw was the most difficult. Mary, who was always called May, was eighteen and the prettiest girl in Katahut. She was leaving anyway. Katahut was nothing to her. She saw no reason why it shouldn't be evacuated.

"It's a dull, priggish, half-dead little place," she told Hank hotly, "full of dull, priggish, half-dead little people. It should have been broken up long ago. There are still people who won't speak to me because I once walked down the street in a sunsuit, because I don't go to church and because I wouldn't marry Jim Jacobs. And, because I've been out with two or three different boys, even people who like me call me boy-crazy. This is a town where you're guilty until you're proved innocent."

"It's your home, May," Hank

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said quietly. "Far more than ours. I was born on Earth. You were not only born here, your father and mother were."

"They're dead and I'm leaving," said May. "I've had eighteen years here and it seems like a thousand."

"The first eighteen are always the worst."

May grinned unwillingly. "Don't get me wrong about this, Hank," she said. "I like you. You were nice to me when I was a kid, and no more and no less nice to me when I grew up. If you'd had a son or maybe a grandson, I guess I could have gone for him and I might have been your daughter-in-law or granddaughter-in-law. If it was just a personal thing, I'd sign your petition like a shot. But what I feel is that everyone who signs that sheet of yours has to feel this town's worth saving, and I don't."

Hank recognized defeat and left her alone. Perhaps, since she was leaving, the EC men wouldn't think the absence of her name on the list kept the verdict from being unanimous.

Later on, when it began to look as if, after all, there was a chance of getting the unanimous verdict, Hank wasn't so happy about May's refusal to sign the petition.

Then she walked in shamefacedly and signed. "People have been so decent lately," she complained. "Did you put them up to it? No, I suppose you wouldn't. You're too straight. Presentations, good-luck tokens, everybody saying they were sorry I was going and they hoped I'd be back some time. Then I realized there wouldn't be anywhere to come back to. Maybe the fact that there are two generations of Henshaws buried in the churchyard means something after all. They didn't live long, did they?"

Hank was very tender with her. He knew somehow that she wouldn't live long either. Whatever anyone said about the Henshaws, nobody could accuse them of being lucky.

YOUNG Tom Hollins, unlike Cuan and May, wasn't difficult at all. He just wouldn't sign.

Tom was a tall, good-looking young fellow—the right type for May, one would have thought. But they had bounced apart in childhood somehow, and never got together again. Tom didn't often argue, but when he was sure he was right about something, there was no shaking him.

"You see yourself as a crusader," he told Hank. "On one side the cold, feelingless machine, on the other the old man championing the little people."

"If you say so, Tom," said Hank agreeably.

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Tom grinned. "You're good at it, of course," he admitted. "You've done wonders already. But you're all wrong. This isn't a battle between men and machines."

"Just what I've been saying all along," said Hank. "I've got nothing again electronic brains. They do their job. All I say is we shouldn't be shifted if we don't want to shift."

"No force? No coercion?"

"That's right."

"Well, I hope you'll be consistent and not try to coerce me into signing your protest."

"You think the machine is right?"

"Yes."

"You want the machine to be right?"

"Sure I do. Why not?"

"You'd rather a mechanical brain was right than a human one?"

"Hank, no doubt you could argue the hind leg off a horse, but you're not going to get the chance to argue the hind leg off me. I'll come around and help you to collect signatures if you like, but I won't sign."

"That's a curious attitude."

"Could be. It's simple enough if you put it this way—I'll help you because I like you, but I won't sign the roll because I don't think it's right. See?"

About that time the EC chief from Cannap came to visit Katahut. Hank welcomed him gravely, but with inward glee. The EC man was worried. He had heard how the protest was going.

He told Hank: "I hear most of the people in town think as you do, Mr. Todd."

"It's beginning to look that way."

"Of course, this petition isn't official, you understand. You are the prime mover in this appeal, and though I understand you once were mayor of the town, you no longer hold . . ."

Hank cut that short. "Mayor Henrison was one of the first to sign. Want him to make it official?"

THE EC chief was ready to try anything, apparently. He had made several other objections, none of which cut any ice, and he seemed to know it.

At last he said: "Mr. Todd, I'll be frank with you. I had no authority to suggest that a unanimous protest would make us change our minds over the evacuation of Katahut. In fact, I didn't. You grabbed the idea and left before I could explain."

"You're going back on your word, you mean," said Hank affably.

"Not exactly . . ."

"Approximately is near enough. When do the troops move in?"

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THE EC chief was startled. Hank was a jump ahead of him. "Your obvious plan," remarked Hank, "is to get me on incitement to violence. It won't be easy. I'm past the age of violence myself, and I haven't said any more to anyone than that they should stay put."

"Mr. Todd, you have shown yourself a very capable man. EC needs men like you. Age doesn't matter, for it doesn't seem to bother you. I—"

"That may be the best approach," Hank said thoughtfully, nodding. "If you want me to kick you into the street, all you have to do is come right out with it and offer to bribe me."

The EC chief groped for words. "I wish you would understand. It's a simple question of necessity. We *must* evacuate one of these small uneconomic towns. It's all very well for you to say, 'Why Katahut?' But if Katahut gets away with this, do you think any other small town will submit? No, they'll say, 'You didn't evacuate Katahut, so why come to us?'"

"And quite right too. Towns have a right to live, just like individuals."

"But now we can determine the critical factors and the answer for Katahut doesn't come out right. Look, Mr. Todd, you may be a hero here and now, but in a hundred years or less you'll be cursed as the reactionary who brought the whole Venusian colony down in ruins."

"Oh, come now. You may have an electronic brain that can tell you how long to roast meat and whether it will rain on Tuesday, but not whether a town should die. There must be some other way."

"There's no other way!" the EC chief protested. "Some day we may have a civilization that isn't built on economics, but we haven't got it now. Before cybernetics, things just took their course. They went wrong or right. If they went wrong, it was often possible to say *later* that it was at one precise point that the mistake was made. Cybernetics tells us *now* where the mistake is, so that we don't need to make it. The whole future of the human race—"

"Now let's not lose our sense of proportion," said Hank gently. "All we're talking about, at most, is the future of the colony of Venus."

"All right, the whole future of the colony of Venus hangs on just this one little thing."

"But we don't think it's a little thing. We think it's a very big thing. Ask your machine some other questions. Tell it the first solution is no good, because Katahut says no."

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The EC chief went away. The next day was the original date set for the evacuation of Katahut. He said he'd be back. Hank didn't doubt it. Neither did Tom Hollins, who had been a witness at the interview.

"Maybe I should argue," said Tom. "Not to let you convince me that I should sign the roll, but to try to convince you that you should give up the whole idea and let them evacuate Katahut."

"Maybe you should," agreed Hank. "Wouldn't do a bit of good. My cucumbers are coming along fine. So is the petition, for what it's worth. You know, you're the only one who hasn't signed it, Tom. How about making it unanimous?"

Tom shook his head, grinning.

WHEN the EC chief came back the next morning, he brought a hundred Cannap police officers and fifty trucks with him. Hank surveyed them grimly. On his right, Cuan O'Farrell stroked his chin thoughtfully. On his left, Tom Hollins raised his eyebrows as the police quietly dispersed through the small town.

"The petition," said the EC chief, flanked by two uniformed officers. "Is it unanimous?"

"Not quite," said Hank.

"Then . . ."

"Wait a bit," murmured Tom Hollins. "What are these men here for? And all those trucks?"

"There may be a little trouble. We want to be ready for it. If the petition had been unanimous, of course, we might . . ."

"It looks to me," said Tom, "as if the fact that the petition isn't unanimous is only an excuse. You didn't wait to get the answer before you sent your men to do whatever it is they are doing. And you didn't bring all those trucks for nothing. Let's try something, shall we? Hank, where do I sign?"

"I think you're right," Hank remarked. "It doesn't make any difference. The petition is complete, Mr. EC Chief. The next move is up to you."

"I'm sorry. We hoped you would fail. It would have made it easier. But as I told you yesterday, the petition can't be allowed to make any difference. This is too important."

They heard a girl's scream and May Henshaw appeared, thrown over the shoulder of a policeman, but still kicking and struggling.

"From my previous experience of May," said Tom, "I'm surprised that one man can handle her. We'll see what—"

Hank held him back. "I think May will manage," he said.

He was right. When May was dropped to her feet, she dealt with her captor with extreme efficiency. Tom applauded loudly.

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"Now if she'd been as ugly as sin," he remarked, "she'd never have learned that. It's rather sad, but girls as pretty as May can usually look after themselves."

He had spoken casually. Cuan and Hank were old. He wasn't. He swung at the EC- chief and the chief felt it. Whether his nose was broken remained to be seen. It was certainly badly bent.

The population of Katahut was eight hundred and twenty-three. There were a hundred policemen. That meant 8.23 Katahutans for every cop. And the cops had orders not to be unduly violent. People like Tom Hollins were under no such disadvantages.

It was a comic battle. It isn't funny when the weak are hurt, but in the battle of Katahut the only people who were hurt were cops, and that's always funny. Hank moved around under the capable protection of Tom and May, making sure that no serious damage was done. It was better to tear the pants off the policeman than hit them over the head. Without pants they could still move, and all the movement was out of Katahut.

A man isn't necessarily a coward when he runs from a woman. More policemen ran from May

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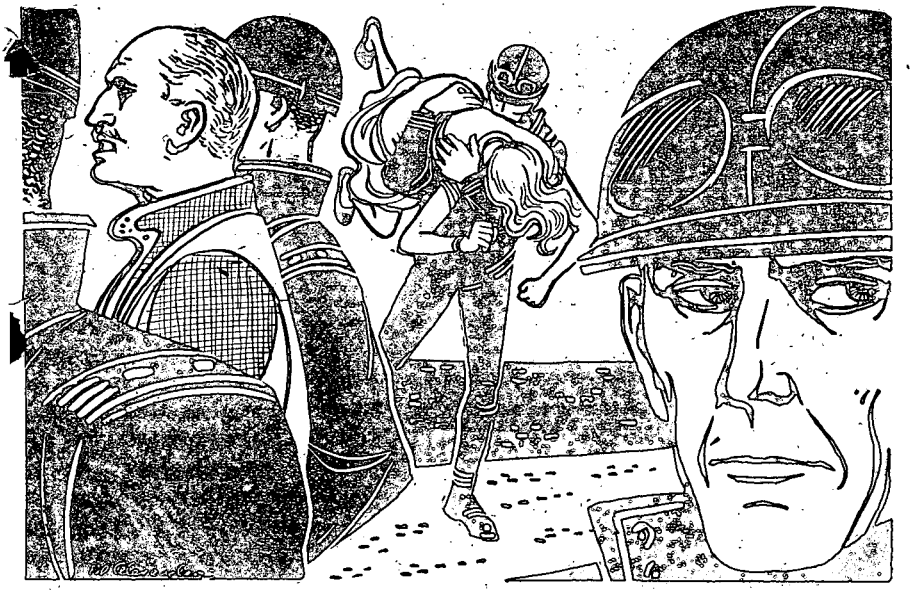

than from Tom. In fact, there was a brief period when Tom, in difficulties, was very glad of May's help and protection.

But May, after all, only had 120 pounds or so at her command. Some of the other women had nearly twice that. Muscle, too, not the soft flesh of Earth-bound housewives and secretaries. They could hoe a row or chop a tree with any man—or poke a jaw, for that matter.

When one of the policemen got a truck going, there was a wild rush to climb aboard. The truck wobbled off in the general direction of Cannap, with nearly forty cops clinging to it—and hardly half a dozen whole pairs of pants.

In an hour there wasn't a cop left in Katahut except the two local policemen, who darted home to get out of uniform in case anyone should make a mistake.

HANK and Cuan and Tom and Bill and May, breathless but content, looked down the dusty road.

"Will they come back?" Cuan asked.

Hank pondered. "I don't think so. There would be too much public feeling now. They may put me in jail for a month or two,

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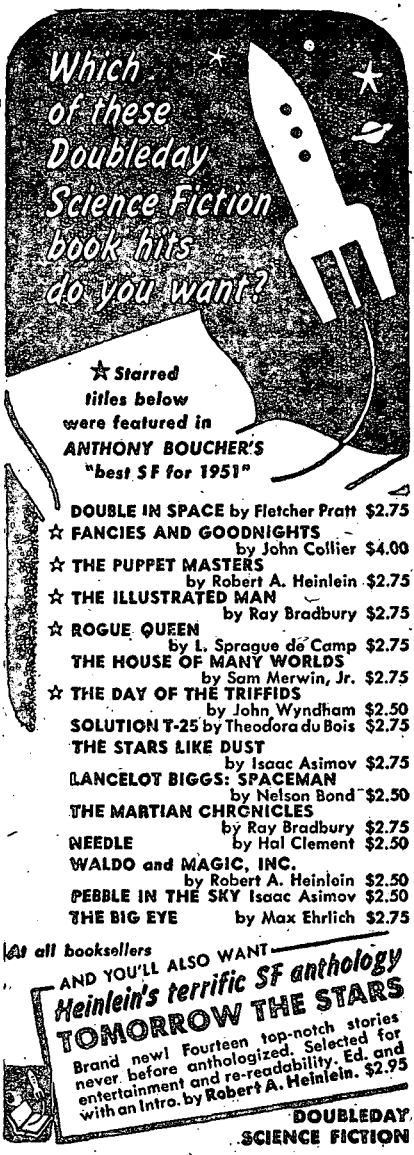
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but I don't think they'll do even that. I was careful not to raise a hand in anger. You'd better keep out of the way, Tom. I don't think it matters for you, May. They can't put you in jail for knocking out policemen. It would make them look silly."

"Then it's over?" said Cuan, apparently troubled by a feeling of anti-climax.

"I think so. They'll try another small town now. It will tell them, quite rightly, to go to hell. I think we've won our case."

They had. EC couldn't keep a hundred cops quiet—men who, despite everything, were more in sympathy with the Katahutans than not. And a dozen Katahutans told the story, with glee, to any newspaperman who cared to ask for it. It made good copy. There was hardly a newspaper on Venus, Earth or Mars that didn't run cartoons on the Battle of Katahut—or, as someone christened it, the Battle of Sans Culottes. Everyone laughed and thought it was a good story.

Hardly anyone paid any attention to the serious articles in the same papers pointing out that Katahut's fight for life was all very well, but if the electronic brain said this meant economic chaos in Venus, it was probably right.

It *was* right, of course.

—J. T. M'INTOSH

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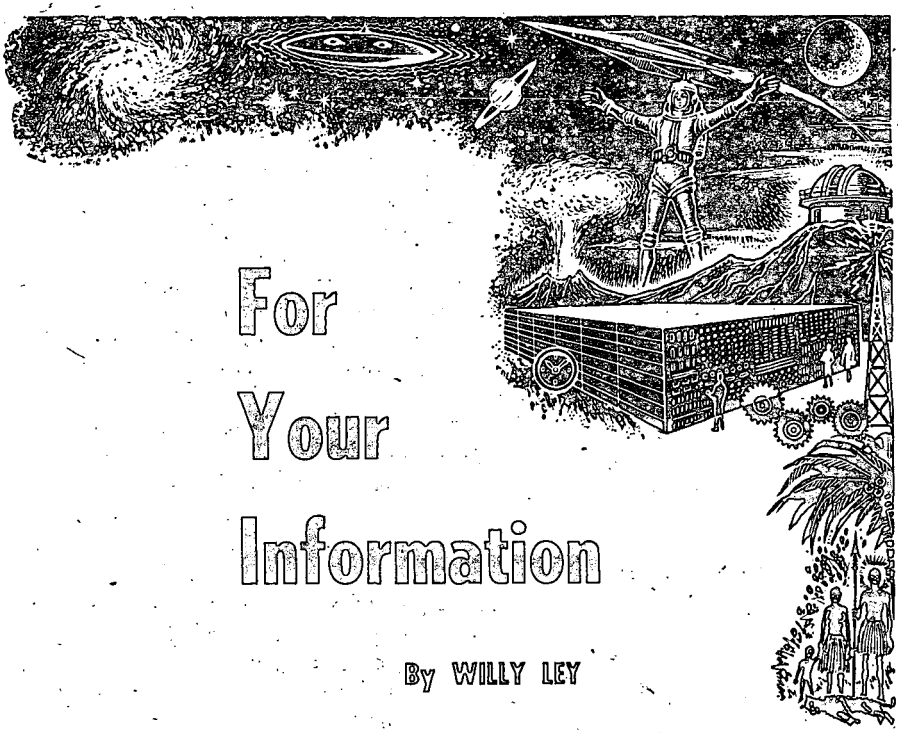

For Your Information

By WILLY LEY

CARBON-14 AND THE ICE AGE

THE man who is used to distances expressed in miles and to time intervals measured in years always feels at a loss when it comes to astronomical distances and to geological times. He hears an astronomer refer casually to "a comparatively near star, only eleven light-years away"—each light-year being 5,880,000,000,000 miles! Or he hears a geologist say that a lump of coal was forest 400 million years ago. Of course, scientist

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are now generally believed to know what they are talking about, but the astronomical measurement is still one thing, for after all, that star can be seen and photographed, while the time measurement is another. Who, I was once asked acidly, kept a calendar?

There is a one-word answer to that question. Not who, but *what*. Answer: radioactivity.

Just about half a century ago it was realized that the radioactive decay of uranium produces helium. The late Lord Rutherford of Nelson realized one possible application of this phenomenon immediately. This, he said, would permit dating the age of minerals, provided the minerals had trapped the helium. All one had to do was to measure the helium content of a mineral, then its uranium content, and make a good guess how much helium has escaped. That way the age of the oldest minerals was determined as 700 million years. If one assumed that half of the helium had managed to seep out, the true age would be double that figure.

A few years later Prof. Boltwood came up with a better suggestion. Helium, just because it could and probably did escape, was not reliable enough. But meanwhile it had been found that uranium changed ultimately into lead, which did *not* escape. One merely had to measure and compare the uranium and lead contents. With his method Prof. Boltwood determined the age of the oldest minerals as 2,200,000,000 years. When this figure was first announced, about 1910, it seemed so fantastic that it was generally disbelieved. But it was accepted only a few years later, especially since a number of scientists had done their best to accelerate or decelerate natural radioactive processes. They had tried heat and cold, pressure and vacuum, electric and magnetic field, and every combination of them. The very fact that they had failed utterly was important. If nothing they could think of and apply made any impression on the rate of change, it was likely that nothing that would happen in Nature would change the rate.

But this uranium-lead method, joined some time later by the thorium-lead method, was applicable only for long intervals. One could measure 20 million years, but not 900 years. It was like the speedometer of a car which will tell you that you have driven 150 miles, but which cannot be used to measure two yards of cloth. For that you need a tape measure.

One of the most important developments of the postwar years is that a reliable method for dating comparatively short periods

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of time is now in existence. Developed originally by Drs. J. R. Arnold and W. F. Libby of the University of Chicago, it also relies on the measurement of residual radioactivity. But the radioactivity element involved is not one of the heavy elements which stays active for millions and millions of years. It is a comparatively short-lived isotope of carbon with the mass 14, consequently, the method is known as the carbon-14 or C-14 method.

C-14 has a so-called "half life" of 5,568 years (with an uncertainty of 30 years either way), which means that at the end of 5,568 years a piece of pure C-14 would be half gone as far as radioactivity is concerned. With such a short half life, C-14 would have vanished from the face of the Earth long ago and would by now be something which might be determined by theory—if it were not formed constantly.

Cosmic rays transform a few nitrogen atoms in the atmosphere into C-14 at a steady rate. Combined with oxygen, these C-14 atoms appear as carbon dioxide, are absorbed by plants, go into starches, are eaten by animals and men. In short, every living thing is permeated to a known extent with the "hot" atoms of C-14. As soon as the living thing dies, it stops absorbing C-14. A beam fashioned from a tree that was felled 5,600 years ago will show half as much radioactivity from C-14 atoms as a beam from a tree felled last year.

It is easy to understand the principle. If the C-14 activity of a living thing is known, one only has to measure the radioactivity of a no-longer-living substance. If one can be sure that there is no radioactivity from other sources around, the two figures can be compared directly.

When Dr. Libby began his work, he naturally first tested his method by measuring the age of things which did not need measuring, because their age was known. One of the first objects he tested was a piece of wood from a fallen sequoia tree which had been sawed through. Botonists had counted the tree rings to determine its age. It must have been a tedious job, for there were 2,928 of them! Dr. Libby reduced his sample to pure carbon and went to work with Geiger counter and slide rule. The result was 3,005 years, which is close enough for any purpose.

Then he tested a piece of wood from a Hittite palace in Syria. Historians had dated the palace as having been built not earlier than 725 B. C. and not later than 625 B. C. The C-14 method gave the age of the wood as 2,600 years. Another test was a piece of wood from an Egyptian sar-

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cophagus which actually had a date on it. That date read, in our terminology, 330 B. C. The C-14 method said that the wood was 2300 years old.

Some of these tests, besides proving the acuracy of the C-14 method, incidentally show that the methods of dating developed by the historians were correct too. All historical objects that could be dated were found to agree within a few years with the dates assigned to them by the historians.

I wrote "all historical objects that could be dated," for not every historical object can be tested by the C-14 method. The method works only with things which were once alive. You cannot date an old armor, nor a stone ruin, nor an old sword. But if that sword has a bone handle, you can date the handle.

The restriction to objects of organic origin is one of the four limitations of the C-14 method. The second is that the object to be dated must weigh at least one ounce. The third limitation is that the object is destroyed in the process. And the fourth is that there is a time limit. Because of the short half life of C-14, the method begins to waver when the object is 20,000 years old; at such an age, there is very little radioactivity left. And 25,000 years is as far as it will go.

The C-14 method has led to a number of surprising results, especially when applied to Indian relics. For reasons not known to me, archeologists thought that the Indians of the Hudson Valley area had settled there in fairly recent times. But C-14 measurements of relics gave rather high ages, the oldest of them dating back to 3,000 B. C. Fiber sandals found in eastern Oregon, completely undatable in any other way, were found to be 9,000 years old.

In addition to having improved archeology, the C-14 method has also had some influence on recent geology. On a map of the State of Oregon, you'll easily locate Crater Lake National Park, with Crater Lake in the center. It was obvious from geological evidence that the volcano which is now water-filled must have exploded at a comparatively recent time. But geologists could only say that it was sometime between 15,000 and 25,000 years ago, maybe a little longer, possibly somewhat less. Then somebody found a tree which had been destroyed by a lava flow from that eruption. Of course it had been burned to charcoal, but charcoal can be tested. It turned out that the eruption had taken place 6,300 years ago, just about half the time of the lowest estimate made.

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The most important result so far is the actual dating of the Ice Age. The whole Ice Age, consisting of four glaciations interrupted by much longer interglacial periods, is estimated to have lasted one million years, from its very beginnings to the melting of the glaciers during their last retreat. The customary figure given for the melting away of the glaciers of the last advance was 20,000 years. Since this was a figure that was still within reach of the C-14 method, some Ice Age material was tested. In Wisconsin there was a forest which had been pushed down by the glaciers of the last advance, and this was worked on.

The result sounded incredible at first: 12,000 years. This was more recent by far than anybody had believed, especially since it marked the last advance, not the last retreat. The retreat could not be studied in Wisconsin; but in Nebraska they found an old forest which had grown up after the retreat of the last ice sheet. They gave an age of 10,500 years. Comparable material from Europe, procured in a great hurry, gave figures which differed from the Wisconsin and Nebraska result only within the expected margin of error. The overall length of the Ice Age probably was what geologists say, but the last glaciation was much closer to our time than believed. It was still going strong 12,000 years ago, but it lasted for less than 20 centuries.

THE ROBIN THAT HIT THE BOTTLE

DID you ever miss making an interesting observation just because you didn't know there was something to see? I did, and if I hadn't been behind in my reading, I might have contributed to something which is still a controversial matter. And every time I see a robin . . .

But let me begin at the beginning, which happens to be in Australia, even though the story itself is essentially an American one. Australia is, as everybody knows, the land of strange animals. But it seems as if the Australians did not know as much of their animals as one would wish—it also seems that they "knew" a lot of things that weren't so—and a quarter-century ago the Australian publishing firm of Angus & Robertson decided to do a set of books on Australian Natural History, written by Australians for Australians. One of these was about Australian birds, written by Alec H Chisholm and published in 1935.

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I own a copy of that book, on page 153 of which there are two paragraphs reading:

> Early in 1934 a boy living near Melbourne wrote to me, stating that he had seen English Starlings picking up ants in their beaks and placing them under their wings. If this had been the first report of the kind I should have doubted the evidence of the boy's eyes. However, seven years previously a Sydney man, one who had watched birds in aviaries and in the wild during many years, had asked me: "What is the reason why soft-billed birds such as starlings, jays, etc., when on the ground, pick up soldier ants, put them under their wings, and after a while take them out again?"
>
> Now, the bare facts having been stated, the reader knows as much of this matter as I do, and probably as much as anyone else does. As far as I have been able to ascertain, there is nothing in text-books to indicate that starlings in Britain place ants beneath their wings.

I have to add that I got the book in 1936 and must have read these paragraphs then, but that they evidently made no impression on me, for I had to look them up later.

Now the scene shifts to Washington, D. C., where I lived for several years in a rented house on Rhode Island Avenue, the typical two-story one-family Washington home, with a front lawn and a back yard and big old trees all around. Also much birdlife, yellow finches and English sparrows, cardinals and catbirds, blue jays and starlings.

On a hot afternoon in late summer 1948, I sat on my front porch, reading, paying very little attention to the robins on the lawn. There were some more on my neighbor's lawn and my neighbors, an old couple, paid as little attention to them as I did. Among the robins on their lawn was a young one which finally attracted notice by behaving queerly. It ran back and forth with short, quick steps, moved in a small circle with one wing and tail dragging on the grass, then tumbled and fell. It sat still, apparently exhausted.

My neighbor went to pick the bird up, which he permitted her to do without a struggle. Naturally the woman assumed that the young bird was hurt. She looked unsuccessfully for a wound and then called my wife Olga to her, exclaiming: "The poor thing is all covered with ants." The two women brushed the ants out of the feathers with a soft brush; the bird did not protest and sat quietly.

Somewhat at a loss what to do next, they called me in. It was decided to perch the bird on top of the garage, out of reach of the cats of the neighborhood. The young robin stayed put for a few minutes, then walked to the rim of the garage's roof, looked down with some curiosity, and suddenly flew away.

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It was at about that instant that Olga realized what we had seen. Just a few days earlier, a book by Frank W. Lane had arrived from England—it has been issued in Spring 1952 in the United States under the title *Animal Wonder World*—but I had as yet merely looked at it, my mind being on missiles, and Olga read it first.

Lane told what had transpired since Chisholm had inserted that short statement in his book. A copy of Chisholm's book had come to the University of Berlin and Prof. Erwin Stresemann had wondered whether the English starling had actually picked up a new habit in Australia. Stresemann published a translation of Chisholm's statement in the German *Ornithological Monthly*. He received an astonishing volume of mail, but because of the war this did not become known. Shortly after the war, Frank W. Lane published an article on this habit in the British magazine *Country Life*, whereupon he found himself at the receiving end of lots of letters. Scores of people have watched scores of birds put ants under their wings.

The champion "anter" in England is a thrush; in America it seems to be the robin which, zoologically speaking, is also a thrush. H. R. Ivor in Canada decided that an aviary should be a convenient place to observe "anting." He was right. But other observers, who made the same decision, did not see anything unusual happen.

These are the ones who claim that it is all a superstition. Of course, their position is difficult, for it is much harder to prove that something does not happen than it is to prove that it does. And the ones who say it does happen because they watched it happen number among them some people with a reputation to uphold. The American reports seem to indicate that thrushes, including robins, crows and starlings seem especially addicted to "anting." Blue jays and pigeons do not do it at all, it seems.

The main question, since the fact can hardly be doubted, is "why?" Chisholm advanced the suggestion that the formic acid, sprayed into the feathers by the trapped ants, kills off parasites. He probably does not hold that opinion any more. Those birds which do not "ant"—which is most of them—have parasites, too. So far there is no definite answer. But several observers stressed "the evident enjoyment" of the birds and their exhaustion afterward. That, to me, sounds like a binge. On formic acid!

Wish I had really watched that afternoon in Washington.

—WILLY LEY

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Is it legal to use the metric system in the United States?

Not only did our Congress make the metric system legal in the United States in 1866, it also defined the inch and the foot in terms of centimeters, the mile in terms of kilometers and so on. In addition to that the weight of the coins were fixed in metric weights, the nickel at 5 grams, the dime at 2½ grams, the quarter at 6¼ grams and the half dollar at 12½ grams.

Is there such a term as "explosion limit" and what does it mean?

I probably could give a better answer if my correspondent had quoted the whole sentence or at least told me what he was reading about. The term may refer to the limits of the danger area of an explosion, or it may refer to the admixture of explosive gases to the air of a closed room. If there is not enough of the explosive gas present, no explosions will occur. If there is too much, no explosion will occur either. These "explosion limits" vary widely for different explosive gases. Expressed in percentages of the available space, the values for some substances are:

Hydrogen	9.4	66.5
Alcohol	3.9	13.7
Marsh gas	6.0	13.0
Ether	2.6	7.9
Benzene	2.6	6.7
Ill. Gas	7.8	19.2

These limits explain a few other things too. You can smell an admixture of illuminating gas to the air long before it has reached the lower limit. Conversely, the explosion limits for hydrogen are rather wide, which helps to make hydrogen leaks so dangerous. Those of carbon monoxide are even wider (16.4—75.1), but since the lower limit is high, poisoning occurs long before there is danger of explosion.

I wonder where the pilot and crew will get the energy for keeping warm in space. As long as the rocket is burning, some of that might be piped into the cabin, but I understand that in any space trip the rockets will burn for a short time only.

Strangely enough, we now know that the main engineering problem will be to keep the cabin cool enough! I'll explain more about that in the main section of this department in the near future.

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THE MOON IS GREEN

By FRITZ LEIBER

Anybody who wanted to escape death could, by paying a very simple price—denial of life!

Illustrated by DAVID STONE

"EFFIE! What the devil are you up to?"

Her husband's voice, chopping through her mood of terrified rapture, made her heart jump like a startled cat, yet by some miracle of feminine self-control her body did not show a tremor.

Dear God, she thought, *he mustn't see it. It's so beautiful, and he always kills beauty.*

"I'm just looking at the Moon," she said listlessly. "It's green."

Mustn't, mustn't see it. And now, with luck, he wouldn't. For the face, as if it also heard and sensed the menace in the voice,

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was moving back from the window's glow into the outside dark, but slowly, reluctantly, and still faunlike, pleading, cajoling, tempting, and incredibly beautiful.

"Close the shutters at once, you little fool, and come away from the window!"

"Green as a beer bottle," she went on dreamily, "green as emeralds, green as leaves with sunshine striking through them and green grass to lie on." She couldn't help saying those last words. They were her token to the face, even though it couldn't hear.

"Effie!"

She knew what that last tone meant. Wearily she swung shut the ponderous lead inner shutters and drove home the heavy bolts. That hurt her fingers; it always did, but he mustn't know that.

"You know that those shutters are not to be touched! Not for five more years at least!"

"I only wanted to look at the Moon," she said, turning around, and then it was all gone — the face, the night, the Moon, the magic—and she was back in the grubby, stale little hole, facing an angry, stale little man. It was then that the eternal thud of the air-conditioning fans and the crackle of the electrostatic precipitators that sieved out the dust reached her consciousness again like the bite of a dentist's drill.

"Only wanted to look at the Moon!" he mimicked her in falsetto. "Only wanted to die like a little fool and make me that much more ashamed of you!" Then his voice went gruff and professional. "Here, count yourself."

She silently took the Geiger Counter he held at arm's length, waited until it settled down to a steady ticking slower than a clock—due only to cosmic rays and indicating nothing dangerous —and then began to comb her body with the instrument. First her head and shoulders, then out along her arms and back along their under side. There was something oddly voluptuous about her movements, although her features were gray and sagging.

The ticking did not change its tempo until she came to her waist. Then it suddenly spurted, clicking faster and faster. Her husband gave an excited grunt, took a quick step forward, froze. She goggled for a moment in fear, then grinned foolishly, dug in the pocket of her grimy apron and guiltily pulled out a wristwatch.

He grabbed it as it dangled from her fingers, saw that it had a radium dial, cursed, heaved it up as if to smash it on the floor, but instead put it carefully on the table.

"You imbecile, you incredible

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imbecile," he softly chanted to himself through clenched teeth, with eyes half closed.

She shrugged faintly, put the Geiger Counter on the table, and stood there slumped.

He waited until the chanting had soothed his anger before speaking again. He said quietly, "I do suppose you still realize the sort of world you're living in?"

SHE nodded slowly, staring at nothingness. Oh, she realized, all right, realized only too well. It was the world that hadn't realized. The world that had gone on stockpiling hydrogen bombs. The world that had put those bombs in cobalt shells, although it had promised it wouldn't, because the cobalt made them much more terrible and cost no more. The world that had started throwing those bombs, always telling itself that it hadn't thrown enough of them yet to make the air really dangerous with the deadly radioactive dust that came from the cobalt. Thrown them and kept on throwing until the danger point, where air and ground would become fatal to all human life, was approached.

Then, for about a month, the two great enemy groups had hesitated. And then each, unknown to the other, had decided it could risk one last gigantic and decisive attack without exceeding the danger point. It had been planned to strip off the cobalt cases, but someone forgot and then there wasn't time. Besides, the military scientists of each group were confident that the lands of the other had got the most dust. The two attacks came within an hour of each other.

After that, the Fury. The Fury of doomed men who think only of taking with them as many as possible of the enemy, and in this case—they hoped—all. The Fury of suicides who know they have botched up life for good. The Fury of cocksure men who realize they have been outsmarted by fate, the enemy, and themselves, and know that they will never be able to improvise a defense when arraigned before the high court of history—and whose unadmitted hope is that there will be no high court of history left to arraign them. More cobalt bombs were dropped during the Fury than in all the preceding years of the war.

After the Fury, the Terror. Men and women with death sifting into their bones through their nostrils and skin, fighting for bare survival under a dust-hazed sky that played fantastic tricks with the light of Sun and Moon, like the dust from Krakatoa that drifted around the world for years. Cities, countryside, and air

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were alike poisoned, alive with deadly radiation.

The only realistic chance for continued existence was to retire, for the five or ten years the radiation would remain deadly, to some well-sealed and radiation-shielded place that must also be copiously supplied with food, water, power, and a means of air-conditioning.

Such places were prepared by the far-seeing, seized by the stronger, defended by them in turn against the desperate hordes of the dying . . . until there were no more of those.

After that, only the waiting, the enduring. A mole's existence, without beauty or tenderness, but with fear and guilt as constant companions. Never to see the Sun, to walk among the trees—or even know if there were still trees.

Oh, yes, she realized what the world was like.

"YOU understand, too, I suppose, that we were allowed to reclaim this ground-level apartment only because the Committee believed us to be responsible people, and because I've been making a damn good showing lately?"

"Yes, Hank."

"I thought you were eager for privacy. You want to go back to the basement tenements?"

God, no! Anything rather than that fetid huddling, that shameless communal sprawl. And yet, was this so much better? The nearness to the surface was meaningless; it only tantalized. And the privacy magnified Hank.

She shook her head dutifully and said, "No, Hank."

"Then why aren't you careful? I've told you a million times, Effie, that glass is no protection against the dust that's outside that window. The lead shutter must never be touched! If you make one single slip like that and it gets around, the Committee will send us back to the lower levels without blinking an eye. And they'll think twice before trusting me with any important jobs."

"I'm sorry, Hank."

"Sorry? What's the good of being sorry? The only thing that counts is never to make a slip! Why the devil do you do such things, Effie? What drives you to it?"

She swallowed. "It's just that it's so dreadful being cooped up like this," she said hesitatingly, "shut away from the sky and the Sun. I'm just hungry for a little beauty."

"And do you suppose I'm not?" he demanded. "Don't you suppose I want to get outside, too, and be carefree and have a good time? But I'm not so damn selfish

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about it. I want my children to enjoy the Sun, and my children's children. Don't you see that that's the all-important thing and that we have to behave like mature adults and make sacrifices for it?"

"Yes, Hank."

He surveyed her slumped figure, her lined and listless face. "You're a fine one to talk about hunger for beauty," he told her. Then his voice grew softer, more deliberate. "You haven't forgotten, have you, Effie, that until last month the Committee was so concerned about your sterility? That they were about to enter my name on the list of those waiting to be allotted a free woman? Very high on the list, too!"

She could nod even at that one, but not while looking at him. She turned away. She knew very well that the Committee was justified in worrying about the birth rate. When the community finally moved back to the surface again, each additional healthy young person would be an asset, not only in the struggle for bare survival, but in the resumed war against Communism which some of the Committee members still counted on.

It was natural that they should view a sterile woman with disfavor, and not only because of the waste of her husband's germplasm, but because sterility might indicate that she had suffered more than the average from radiation. In that case, if she did bear children later on, they would be more apt to carry a defective heredity, producing an undue number of monsters and freaks in future generations, and so contaminating the race.

Of course she understood it. She could hardly remember the time when she didn't. Years ago? Centuries? There wasn't much difference in a place where time was endless.

HIS lecture finished, her husband smiled and grew almost cheerful.

"Now that you're going to have a child, that's all in the background again. Do you know, Effie, that when I first came in, I had some very good news for you? I'm to become a member of the Junior Committee and the announcement will be made at the banquet tonight." He cut short her mumbled congratulations. "So brighten yourself up and put on your best dress. I want the other Juniors to see what a handsome wife the new member has got." He paused. "Well, get a move on!"

She spoke with difficulty, still not looking at him. "I'm terribly sorry, Hank, but you'll have to go alone. I'm not well."

He straightened up with an in-

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dignant jerk. "There you go again! First that infantile, inexcusable business of the shutters, and now this! No feeling for my reputation at all. Don't be ridiculous, Effie. You're coming!"

"Terribly sorry," she repeated blindly, "but I really can't. I'd just be sick. I wouldn't make you proud of me at all."

"Of course you won't," he retorted sharply. "As it is, I have to spend half my energy running around making excuses for you—why you're so odd, why you always seem to be ailing, why you're always stupid and snobbish and say the wrong thing. But tonight's really important, Effie. It will cause a lot of bad comment if the new member's wife isn't present. You know how just a hint of sickness starts the old radiation-disease rumor going. You've *got* to come, Effie."

She shook her head helplessly.

"Oh, for heaven's sake, come on!" he shouted, advancing on her. "This is just a silly mood. As soon as you get going, you'll snap out of it. There's nothing really wrong with you at all."

He put his hand on her shoulder to turn her around, and at his touch her face suddenly grew so desperate and gray that for a moment he was alarmed in spite of himself.

"Really?" he asked, almost with a note of concern.

She nodded miserably.

"Hmm!" He stepped back and strode about irresolutely. "Well, of course, if that's the way it is . . ." He checked himself and a sad smile crossed his face. "So you don't care enough about your old husband's success to make one supreme effort in spite of feeling bad?"

Again the helpless headshake. "I just can't go out tonight, under any circumstances." And her gaze stole toward the lead shutters.

He was about to say something when he caught the direction of her gaze. His eyebrows jumped. For seconds he stared at her incredulously, as if some completely new and almost unbelievable possibility had popped into his mind. The look of incredulity slowly faded, to be replaced by a harder, more calculating expression. But when he spoke again, his voice was shockingly bright and kind.

"Well, it can't be helped naturally, and I certainly wouldn't want you to go if you weren't able to enjoy it. So you hop right into bed and get a good rest. I'll run over to the men's dorm to freshen up. No, really, I don't want you to have to make any effort at all. Incidentally, Jim Barnes isn't going to be able to come to the banquet either—touch of the old 'flu, he tells me,

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of all things."

He watched her closely as he mentioned the other man's name, but she didn't react noticeably. In fact, she hardly seemed to be hearing his chatter.

"I got a bit sharp with you, I'm afraid, Effie," he continued contritely. "I'm sorry about that. I was excited about my new job and I guess that was why things upset me. Made me feel let down when I found you weren't feeling as good as I was. Selfish of me. Now you get into bed right away and get well. Don't worry about me a bit. I know you'd come if you possibly could. And I know you'll be thinking about me. Well, I must be off now."

He started toward her, as if to embrace her, then seemed to think better of it. He turned back at the doorway and said, emphasizing the words, "You'll be completely alone for the next four hours." He waited for her nod, then bounced out.

SHE stood still until his footsteps died away. Then she straightened up, walked over to where he'd put down the wristwatch, picked it up and smashed it hard on the floor. The crystal shattered, the case flew apart, and something went *zing!*

She stood there breathing heavily. Slowly her sagged features lifted, formed themselves into the beginning of a smile. She stole another look at the shutters. The smile became more definite. She felt her hair, wet her fingers and ran them along her hairline and back over her ears. After wiping her hands on her apron, she took it off. She straightened her dress, lifted her head with a little flourish, and stepped smartly toward the window.

Then her face went miserable again and her steps slowed.

No, it couldn't be, and it won't be, she told herself. It had been just an illusion, a silly romantic dream that she had somehow projected out of her beauty-starved mind and given a moment's false reality. There couldn't be anything alive outside. There hadn't been for two whole years.

And if there conceivably were, it would be something altogether horrible. She remembered some of the pariahs—hairless, witless creatures, with radiation welts crawling over their bodies like worms, who had come begging for succor during the last months of the Terror—and been shot down. How they must have hated the people in refuges!

But even as she was thinking these things, her fingers were caressing the bolts, gingerly drawing them, and she was opening the shutters gently, apprehensively.

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No, there couldn't be anything outside, she assured herself wryly, peering out into the green night. Even her fears had been groundless.

But the face came floating up toward the window. She started back in terror, then checked herself.

For the face wasn't horrible at all, only very thin, with full lips and large eyes and a thin proud nose like the jutting beak of a bird. And no radiation welts or scars marred the skin, olive in the tempered moonlight. It looked, in fact, just as it had when she had seen it the first time.

For a long moment the face stared deep, deep into her brain. Then the full lips smiled and a half-clenched, thin-fingered hand materialized itself from the green darkness and rapped twice on the grimy pane.

Her heart pounding, she furiously worked the little crank that opened the window. It came unstuck from the frame with a tiny explosion of dust and a *zing* like that of the watch, only louder. A moment later it swung open wide and a puff of incredibly fresh air caressed her face and the inside of her nostrils, stinging her eyes with unanticipated tears.

The man outside balanced on the sill, crouching like a faun, head high, one elbow on knee. He was dressed in scarred, snug trousers and an old sweater.

"Is it tears I get for a welcome?" he mocked her gently in a musical voice. "Or are those only to greet God's own breath, the air?"

HE swung down inside and now she could see he was tall. Turning, he snapped his fingers and called, "Come, puss."

A black cat with a twisted stump of a tail and feet like small boxing gloves and ears almost as big as rabbits' hopped clumsily in view. He lifted it down, gave it a pat. Then, nodding familiarly to Effie, he unstrapped a little pack from his back and laid it on the table.

She couldn't move. She even found it hard to breathe.

"The window," she finally managed to get out.

He looked at her inquiringly, caught the direction of her stabbing finger. Moving without haste, he went over and closed it carelessly.

"The shutters, too," she told him, but he ignored that, looking around.

"It's a snug enough place you and your man have," he commented. "Or is it that this is a free-love town or a harem spot, or just a military post?" He checked her before she could answer. "But

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let's not be talking about such things now. Soon enough I'll be scared to death for both of us. Best enjoy the kick of meeting, which is always good for twenty minutes at the least." He smiled at her rather shyly. "Have you food? Good, then bring it."

She set cold meat and some precious canned bread before him and had water heating for coffee. Before he fell to, he shredded a chunk of meat and put it on the floor for the cat, which left off its sniffing inspection of the walls and ran up eagerly mewing. Then the man began to eat, chewing each mouthful slowly and appreciatively.

From across the table Effie watched him, drinking in his every deft movement, his every cryptic quirk of expression. She attended to making the coffee, but that took only a moment. Finally she could contain herself no longer.

"What's it like up there?" she asked breathlessly. "Outside, I mean."

He looked at her oddly for quite a space. Finally, he said flatly, "Oh, it's a wonderland for sure, more amazing than you tombed folk could ever imagine. A veritable fairyland." And he quickly went on eating.

"No, but really," she pressed.

Noting her eagerness, he smiled and his eyes filled with playful tenderness. "I mean it, on my oath," he assured her. "You think the bombs and the dust made only death and ugliness. That was true at first. But then, just as the doctors foretold, they changed the life in the seeds and loins that were brave enough to stay. Wonders bloomed and walked." He broke off suddenly and asked, "Do any of you ever venture outside?"

"A few of the men are allowed to," she told him, "for short trips in special protective suits, to hunt for canned food and fuels and batteries and things like that."

"Aye, and those blind-souled slugs would never see anything but what they're looking for," he said, nodding bitterly: "They'd never see the garden where a dozen buds blossom where one did before, and the flowers have petals a yard across, with stingless bees big as sparrows gently supping their nectar. Housecats grown spotted and huge as leopards (not little runts like Joe Louis here) stalk through those gardens. But they're gentle beasts, no more harmful than the rainbow-scaled snakes that glide around their paws, for the dust burned all the murder out of them, as it burned itself out.

"I've even made up a little poem about that. It starts, 'Fire can hurt me, or water, or the weight of Earth. But the dust is

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my friend.' Oh, yes, and then the robins like cockatoos and squirrels like a princess's ermine! All under a treasure chest of Sun and Moon and stars that the dust's magic powder changes from ruby to emerald and sapphire and amethyst and back again. Oh, and then the new children—"

"You're telling the truth?" she interrupted him, her eyes brimming with tears. "You're not making it up?"

"I am not," he assured her solemnly. "And if you could catch a glimpse of one of the new children, you'd never doubt me again. They have long limbs as brown as this coffee would be if it had lots of fresh cream in it, and smiling delicate faces and the whitish teeth and the finest hair. They're so nimble that I—a sprightly man and somewhat enlivened by the dust—feel like a cripple beside them. And their thoughts dance like flames and make me feel a very imbecile.

"Of course, they have seven fingers on each hand and eight toes on each foot, but they're the more beautiful for that. They have large pointed ears that the Sun shines through. They play in the garden, all day long, slipping among the great leaves and blooms, but they're so swift that you can hardly see them, unless one chooses to stand still and look at you. For that matter, you have to look a bit hard for all these things I'm telling you."

"But it is true?" she pleaded.

"Every word of it," he said, looking straight into her eyes. He put down his knife and fork. "What's your name?" he asked softly. "Mine's Patrick."

"Effie," she told him.

He shook his head. "That can't be," he said. Then his face brightened. "Euphemia," he exclaimed. "That's what Effie is short for. Your name is Euphemia." As he said that, looking at her, she suddenly felt beautiful. He got up and came around the table and stretched out his hand toward her.

"Euphemia—" he began.

"Yes?" she answered huskily, shrinking from him a little, but looking up sideways, and very flushed.

"Don't either of you move," Hank said.

The voice was flat and nasal because Hank was wearing a nose respirator that was just long enough to suggest an elephant's trunk. In his right hand was a large blue-black automatic pistol.

THEY turned their faces to him. Patrick's was abruptly alert, shifty. But Effie's was still smiling tenderly, as if Hank could not break the spell of the magic garden and should be pitied for not knowing about it.

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"You little—" Hank began with an almost gleeful fury, calling her several shameful names. He spoke in short phrases, closing tight his unmasked mouth between them while he sucked in breath through the respirator. His voice rose in a crescendo. "And not with a man of the community, but a pariah! *A pariah!*"

"I hardly know what you're thinking, man, but you're quite wrong," Patrick took the opportunity to put in hurriedly, conciliatingly. "I just happened to be coming by hungry tonight, a lonely tramp, and knocked at the window. Your wife was a bit foolish and let kindheartedness get the better of prudence—"

"Don't think you've pulled the wool over my eyes, Effie," Hank went on with a screechy laugh, disregarding the other man completely. "Don't think I don't know why you're suddenly going to have a child after four long years."

At that moment the cat came nosing up to his feet. Patrick watched him narrowly, shifting his weight forward a little, but Hank only kicked the animal aside without taking his eyes off them.

"Even that business of carrying the wristwatch in your pocket instead of on your arm," he went on with channeled hysteria. "A neat bit of camouflage, Effie. Very neat. And telling me it was my child, when all the while you've been seeing him for months!"

"Man, you're mad; I've not touched her!" Patrick denied hotly though still calculatingly, and risked a step forward, stopping when the gun instantly swung his way.

"Pretending you were going to give me a healthy child," Hank raved on, "when all the while you knew it would be—either in body or germ plasm—a thing like *that!*"

He waved his gun at the malformed cat, which had leaped to the top of the table and was eating the remains of Patrick's food, though its watchful green eyes were fixed on Hank.

"I should shoot him down!" Hank yelled, between sobbing, chest-racking inhalations through the mask. "I should kill him this instant for the contaminated pariah he is!"

All this while Effie had not ceased to smile compassionately. Now she stood up without haste and went to Patrick's side. Disregarding his warning, apprehensive glance, she put her arm lightly around him and faced her husband.

"Then you'd be killing the bringer of the best news we've ever had," she said, and her voice was like a flood of some warm sweet liquor in that musty,

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hate-charged room. "Oh, Hank, forget your silly, wrong jealousy and listen to me. Patrick here has something wonderful to tell us."

HANK stared at her. For once he screamed no reply.. It was obvious that he was seeing for the first time how beautiful she had become, and that the realization jolted him terribly.

"What do you mean?" he finally asked unevenly, almost fearfully.

"I mean that we no longer need to fear the dust," she said, and now her smile was radiant. "It never really did hurt people the way the doctors said it would. Remember how it was with me, Hank, the exposure I had and recovered from, although the doctors said I wouldn't at first—and without even losing my hair? Hank, those who were brave enough to stay outside, and who weren't killed by terror and suggestion and panic—they adapted to the dust. They changed, but they changed for the better. Everything—"

"Effie, he told you lies!" Hank interrupted, but still in that same agitated, broken voice, cowed by her beauty.

"Everything that grew or moved was purified," she went on ringingly. "You men going outside have never seen it, because you've never had eyes for it. You've been blinded to beauty, to life itself. And now all the power in the dust has gone and faded, anyway, burned itself out. That's true, isn't it?"

She smiled at Patrick for confirmation. His face was strangely veiled, as if he were calculating obscure changes. He might have given a little nod; at any rate, Effie assumed that he did, for she turned back to her husband.

"You see, Hank? We can all go out now. We need never fear the dust again. Patrick is a living proof of that," she continued triumphantly, standing straighter, holding him a little tighter. "Look at him. Not a scar or a sign, and he's been out in the dust for years. How could he be this way, if the dust hurt the brave? Oh, believe me, Hank! Believe what you see. Test it if you want. Test Patrick here."

"Effie, you're all mixed up. You don't know—" Hank faltered, but without conviction of any sort.

"Just test him," Effie repeated with utter confidence, ignoring—not even noticing—Patrick's warning nudge.

"All right," Hank mumbled. He looked at the stranger dully. "Can you count?" he asked.

Patrick's face was a complete enigma. Then he suddenly spoke, and his voice was like a fencer's foil—light, bright, alert, con-

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stantly playing, yet utterly on guard.

"Can I count? Do you take me for a complete simpleton, man? Of course I can count!"

"Then count yourself," Hank said, barely indicating the table.

"Count myself, should I?" the other retorted with a quick facetious laugh. "Is this a kindergarten? But if you want me to, I'm willing." His voice was rapid. "I've two arms, and two legs, that's four. And ten fingers and ten toes—you'll take my word for them? — that's twenty-four. A head, twenty-five. And two eyes and a nose and a mouth—"

"With this, I mean," Hank said heavily, advanced to the table, picked up the Geiger counter, switched it on, and handed it across the table to the other man.

But while it was still an arm's length from Patrick, the clicks began to mount furiously, until they were like the chatter of a pigmy machine gun. Abruptly the clicks slowed, but that was only the counter shifting to a new scaling circuit, in which each click stood for 512 of the old ones.

WITH those horrid, rattling little volleys, fear cascaded into the room and filled it, smashing like so much colored glass all the bright barriers of words Effie had raised against it. For no dreams can stand against the Geiger counter, the Twentieth Century's mouthpiece of ultimate truth. It was as if the dust and all the terrors of the dust had incarnated themselves in one dread invading shape that said in words stronger than audible speech, "Those were illusions, whistles in the dark. This is reality, the dreary, pitiless reality of the Burrowing Years."

Hank scuttled back to the wall. Through chattering teeth he babbled, ". . . enough radioactives . . . kill a thousand men . . . freak . . . a freak . . ." In his agitation he forgot for a moment to inhale through the respirator.

Even Effie—taken off guard, all the fears that had been drilled into her twanging like piano wires—shrank from the skeletal-seeming shape beside her, held herself to it only by desperation.

Patrick did it for her. He disengaged her arm and stepped briskly away. Then he whirled on them, smiling sardonically, and started to speak, but instead looked with distaste at the chattering Geiger counter he held between fingers and thumb.

"Have we listened to this racket long enough?" he asked.

Without waiting for an answer, he put down the instrument on the table. The cat hurried over to it curiously and the clicks be-

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gan again to mount in a minor crescendo. Effie lunged for it frantically, switched it off, darted back.

"That's right," Patrick said with another chilling smile. "You do well to cringe, for I'm death itself. Even in death I could kill you, like a snake." And with that his voice took on the tones of a circus barker. "Yes, I'm a freak, as the gentleman so wisely said. That's what one doctor who dared talk with me for a minute told me before he kicked me out. He couldn't tell me why, but somehow the dust doesn't kill me. Because I'm a freak, you see, just like the men who ate nails and walked on fire and ate arsenic and stuck themselves through with pins. Step right up, ladies and gentlemen—only not too close!—and examine the man the dust can't harm. Rappacini's child, brought up to date; his embrace, death!

"And now," he said, breathing heavily, "I'll get out and leave you in your damned lead cave."

He started toward the window. Hank's gun followed him shakingly.

"Wait!" Effie called in an agonized voice. He obeyed. She continued falteringly, "When we were together earlier, you didn't act as if . . ."

"When we were together earlier, I wanted what I wanted," he snarled at her. "You don't suppose I'm a bloody saint, do you?"

"And all the beautiful things you told me?"

"That," he said cruelly, "is just a line I've found that women fall for. They're all so bored and so starved for beauty—as *they* generally put it."

"Even the garden?" Her question was barely audible through the sobs that threatened to suffocate her.

He looked at her and perhaps his expression softened just a trifle.

"What's outside," he said flatly, "is just a little worse than either of you can imagine." He tapped his temple. "The garden's all here."

"You've killed it," she wept. "You've killed it in me. You've both killed everything that's beautiful. But you're worse," she screamed at Patrick, "because he only killed beauty once, but you brought it to life just so you could kill it again. Oh, I can't stand it! I won't stand it!" And she began to scream.

Patrick started toward her, but she broke off and whirled away from him to the window, her eyes crazy.

"You've been lying to us," she cried. "The garden's there. I know it is. But you don't want to share it with anyone."

"No, no, Euphemia," Patrick

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protested anxiously. "It's hell out there, believe me. I wouldn't lie to you about it."

"Wouldn't lie to me!" she mocked. "Are you afraid, too?"

With a sudden pull, she jerked open the window and stood before the blank green-tinged oblong of darkness that seemed to press into the room like a menacing, heavy, wind-urged curtain.

At that Hank cried out a shocked, pleading, "Effie!"

She ignored him. "I can't be cooped up here any longer," she said. "And I won't, now that I know. I'm going to the garden."

Both men sprang at her, but they were too late. She leaped lightly to the sill, and by the time they had flung themselves against it, her footsteps were already hurrying off into the darkness.

"Effie, come back! Come back!" Hank shouted after her desperately, no longer thinking to cringe from the man beside him, or how the gun was pointed. "I love you, Effie. Come back!"

Patrick added his voice. "Come back, Euphemia. You'll be safe if you come back right away. Come back to your home."

No answer to that at all.

They both strained their eyes through the greenish murk. They could barely make out a shadowy figure about half a block down the near-black canyon of the dismal, dust-blown street, into which the greenish moonlight hardly reached. It seemed to them that the figure was scooping something up from the pavement and letting it sift down along its arms and over its bosom.

"Go out and get her, man," Patrick urged the other. "For if I I go out for her, I warn you I won't bring her back. She said something about having stood the dust better than most, and that's enough for me."

But Hank, chained by his painfully learned habits and by something else, could not move.

And then a ghostly voice came whispering down the street, chanting, "Fire can hurt me, or water, or the weight of the Earth. But the dust is my friend."

Patrick spared the other man one more look. Then, without a word, he vaulted up and ran off.

Hank stood there. After perhaps a half minute he remembered to close his mouth when he inhaled. Finally he was sure the street was empty. As he started to close the window, there was a little *mew*.

He picked up the cat and gently put it outside. Then he did close the window, and the shutters, and bolted them, and took up the Geiger counter, and mechanically began to count himself.

—FRITZ LEIBER

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martians never die

By LUCIUS DANIEL

It was a wonderful bodyguard: no bark, no bite, no sting . . . just conversion of the enemy!

AT three-fifteen, a young man walked into the circular brick building and took a flattened package of cigarettes from his shirt pocket.

"Mr. Stern?" he asked, throwing away the empty package.

Stern looked with hard eyes at the youthful reporter. He recognized the type.

"So they're sending around cubs now," he said.

"I'm no cub—I've been on the paper a whole year," the reporter protested, and then stopped, realizing his annoyance had betrayed him.

"Only a year. The first time they sent their best man."

"This ain't the first time," said the young man, assuming a bored look. "It's the fourth time, and next year I don't think anybody will come at all. Why should they?"

"Why, because they might be able to make it," Beryl spoke up. "Something must have happened before."

Stern watched the reporter

Illustrated by WILLER

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drink in Beryl's loveliness.

"Well, Mrs. Curtis," the young man said, "everyone has it figured out that Dr. Curtis got stuck in the fourth dimension, or else lost, or died, maybe. Even Einstein can't work out the stellar currents your husband was depending on."

"It's very simple," replied Beryl, "but I can't explain it intelligibly. I wish you could have talked to Dr. Curtis."

"Why is it that we have to come out here just once a year to wait for him? Is that how the fourth dimension works?"

"It's the only time when the stellar currents permit the trip back to Earth. And it's *not* the fourth dimension! Clyde was always irritated when anyone would talk about his traveling to Mars in the fourth dimension."

"It's interdimensional," Stern put in.

"And you're his broker?" asked the reporter, throwing his cigarette down on the brick floor and stepping on it. "You're his old friend from college days, handled his financial affairs, and helped him raise enough money to build his machine?"

"Yes," Stern replied, a little pompously. "It was through my efforts that several wealthy men took an interest in the machine, so that Dr. Curtis did not have to bear the entire expense himself."

"Yeah, yeah," the reporter sighed. "I read an old story on it before I came here. Now I'm out of cigarettes." He looked hopefully at Stern.

Stern returned the look coldly. "There's a store where you can buy some about three blocks down the road."

"Is that the room where he's expected to materialize with his machine?" The reporter pointed to an inner door.

"Yes. Dr. Curtis wanted to be sure no one would be injured. This inner circular room was built first; then he had the outer wall put up as an added precaution. The circular passageway we're in leads all around the old room, but this doorway is the only entrance."

"And what are those holes in the top of the door for?"

"If he returns, we can tell by the displaced air rushing out. Then the door will open automatically."

"And when is the return scheduled for?" asked the reporter.

"Three-forty-seven and twenty-nine seconds."

"If it happens," the reporter added skeptically. "And if it doesn't, we have to wait another year."

"Optimum conditions occur just once a year."

"Well, I'm going out to get some cigarettes. I've got time . . . and probably nothing to wait

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for. I'll return though."

He walked briskly through the outer door.

"THIS is the hardest part of the year, especially now. Suppose he did come back," Beryl said plaintively.

"You don't have to worry," Stern assured her. "Clyde himself said that if he didn't come back the second year, he might not make it at all." Stern opened his gold case now and offered Beryl a cigarette.

She shook her head. "But he made two trial runs in it first and came back."

"That was for a short distance only—that is, a short distance astronomically. Figuring for Mars was another story. Maybe he missed the planet and . . ."

"Oh, don't! It's just not *knowing* that I can't stand."

"Well," he said drily, "we'll know in—" he stopped and looked at his wristwatch — "in just about fifteen minutes."

"I can't wait," she moaned.

He put his arm around her. "Relax. Take it easy and stop worrying. It'll just be like last time."

"Not the last time at all. We hadn't—"

"As soon as we are able to leave here," he said, drawing her close and squeezing her gently, "I'll take steps to have him declared legally dead. Then we'll get married."

"That's not much of a proposal," she smiled. "But I guess I'll have to accept you. You have Clyde's power of attorney."

"And we'll be rich. Richer than ever. I'll be able to use some of my own ideas about the investments. As a matter of fact, I have already." And he frowned slightly.

"We have enough," Beryl said quickly. "Don't try to speculate. You know how Clyde felt about that."

"But he spent so damned much on the machine. I had to make back those expenses somehow."

Steps sounded outside and they drew apart. The reporter came in with a companion of about his own age.

"Better wipe the lipstick off," he grinned. "It's almost time for something to happen."

Stern dabbed at his mouth angrily with his handkerchief.

At first the sound was so soft that it could hardly be heard, but soon a whistling grew until it became a threat to the eardrums. The reporters looked at each other with glad, excited eyes.

The whistling stopped abruptly and, slowly, the door opened. The reporters rushed in immediately.

Beryl gripped Stern's hand convulsively. "He's come back."

"Yes, but that mustn't change

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our plans, Beryl dear."

"But, Al . . . Oh, why were we so foolish?"

"Not foolish, dear. Not at all foolish. Now we have to go in."

Inside the room was the large sphere of metalloy. It had lost its original gleam and was stained and battered, standing silent, closed, enigmatic.

"Where's the door?" called the first reporter.

The sphere rested on a number of metal stilts, reaching out from the lower hemisphere, which held it about three feet from the floor, like a great pincushion turned upside down.

Slowly, a round section of the sphere's wall swung outward and steps descended. As they touched the floor, both reporters, caught by the same idea, sprinted for it and fought to see which would climb it first.

"Wait!" shouted Stern.

The reporters stopped their scuffling and followed Stern's gaze.

SOMETHING old and leathery and horrible was emerging from the circular doorway. Several tentacles, like so many snakes, slid around the hand rail which ran down the steps. Then, at the top, it paused.

Stern felt an immediate and unreasoning hate for the thing, whatever it was, a hate so strong that he forgot to feel fear. It seemed to him to combine the repulsive qualities of a spider and a toad. The body, fat and repugnant, was covered by a loose skin, dull and leathery, and the fatness seemed to be pulled downward below the lower tentacles like an insect's body, until it was wider at the bottom than at the top.

Like a salt shaker, Stern thought.

It turned its head—it had no neck; the loose skin of the body just turned with it—and looked back inside the sphere. The head resembled a toad's, but a long trident tongue slid in and out quickly, changing the resemblance to that of a malformed snake.

From the interior, Dr. Curtis appeared beside the creature and stood there vaguely for a moment. Stern noticed that his clothes seemed just as new as when he had left, but he had grown a long, untrimmed beard, and his face had a vacant expression, as if he were hypnotized.

The creature looked upward at Curtis, who was head and shoulders taller, and its resemblance changed again in Stern's mind, so that now it looked like a dog, at least in attitude. From its mouth came a low hissing noise.

Curtis looked down at the dog-spider-toad, his eyes slowly be-

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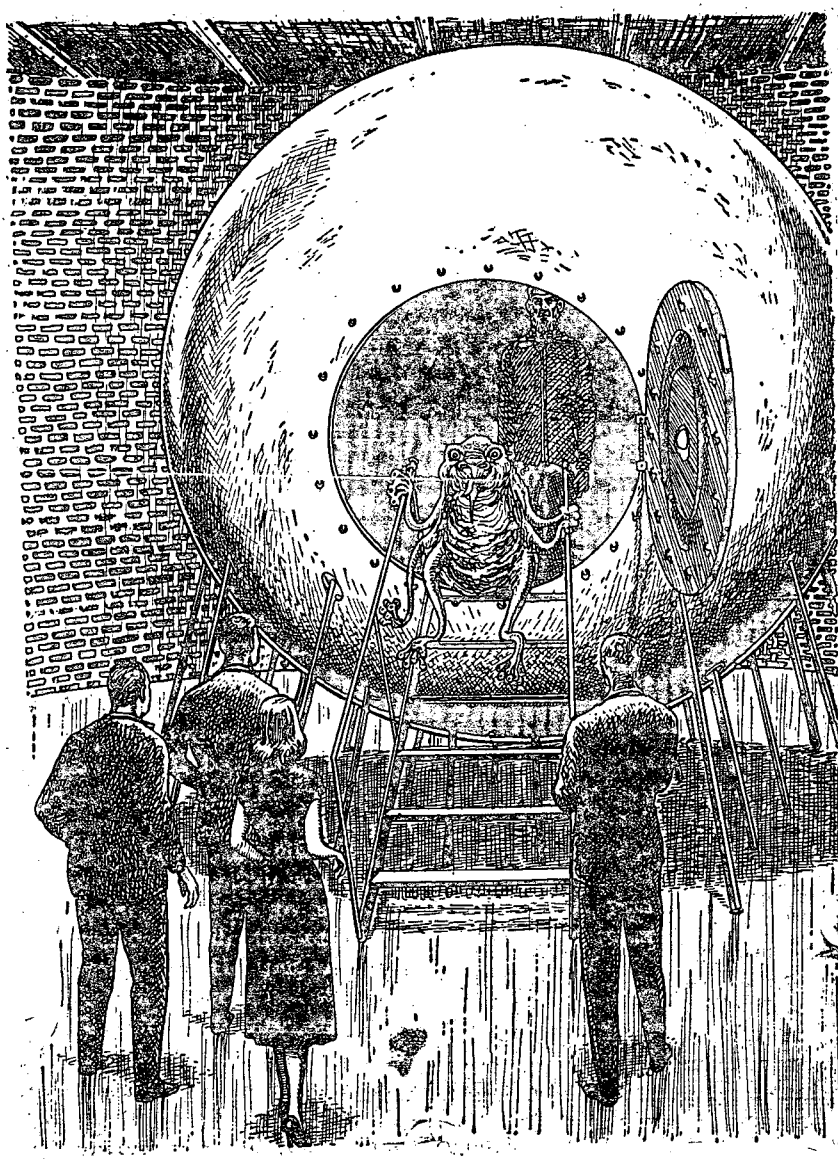

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ginning to focus. The creature wiggled like a seal with a fish in sight, then slid and bumped down the steps, with Curtis following him.

"Clyde!" cried Beryl and rushed toward Curtis.

The outstretched tentacles of the beast stopped her, but at a touch from Curtis they fell away and Beryl was in his arms.

Stern watched the scene sourly and with rage in his heart. Why hadn't Clyde waited another year? Then nothing could have changed things. Now he would lose not only Beryl, but the management of the money that was left, and the marketing of new patents on the machine. Curtis did not approve of speculation, especially when it lost money.

"You've changed, Clyde," Beryl was saying as she hugged him. "What is the matter—do you need a doctor?"

"No, I don't want a doctor, but I have to get home," said Curtis.

Stern felt anger again beating in his brain like heavy surf on a beach. Curtis was sick. The least he could have done was die. Well, maybe he still would. And if he didn't he could be helped to— Stern saw the beast looking at him intently, malevolently. Its face might have looked almost human, now that it was so close, if it had possessed eyebrows and hair. As it was, its nose rose abruptly and flared into two really enormous nostrils, but its mouth looked small and wrinkled, like that of an old grandmother without any teeth.

They turned to the doorway without noticing the absence of the reporters, who had long since run off to telephone and get photographers.

Curtis walked slowly. He would stop for a moment, look about as if expecting something entirely different, and then he would move forward again.

They all got into the car, Curtis and Beryl on the front seat, with Beryl driving, and Stern and the creature in the rear. As Beryl drove, Stern looked savagely at the back of Curtis's head, but he felt the beast staring at him balefully. Could it be a mind reader? That was ridiculous. How could anything that couldn't speak read a person's mind?

He turned to study it. The Martian, if that was what it was, had only six tentacles, three on each side. The lower ones were heavy and almost as thick as legs. The upper ones were small and were obviously used as hands, while it was possible that the middle ones could be used either way. A series of suction cups or sucking pads were at the end of each tentacle. With equipment like this, it could walk right up the side of a building, except, per-

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haps, for the higher gravity of Earth.

Stern could smell it now, a dry, desert smell, and that made it more revolting than ever. They were born to hate each other.

WHEN they got home, Beryl was all solicitousness. The way a woman is when she has a man to impress, Stern thought.

"Just sit right here in your old chair," she told Curtis, "and I'll call a doctor. Then I'll put some water on to heat." But first she knelt by his side and laid her head on his breast. "Oh, darling," she said with a sob, "Why did you wait so long? I've missed you so."

A very good act, Stern told himself bitterly, without believing it at all.

She got up and turned toward Stern. "Will you help me get some water on, Al?" she asked. "I'm going to phone."

He went into the kitchen. He knew where the kettle was, the refrigerator, the mixings. He could hear her dialing, and then, before he got the kettle on the burner, she came inside and closed the kitchen door.

"Clyde's sick and I have to take care of him," she said anxiously.

It wasn't entirely the money, he confessed to himself now. He hated the situation, but he had to give in—on the surface anyway.

"Okay, let's forget the whole thing," he said.

"Oh, Al dear, I knew you'd understand! I've got to go back now and try the phone again. I got a busy signal."

Stern followed her, still rankling at the way Curtis had forced Beryl to live while he spent so generously on his own expensive interests. Shortly after their marriage, he had built a home for Beryl and himself in an exclusive suburb, on a hilly bit of land with a deep ravine at the back. But it was small and Beryl had not even been allowed maids except when they entertained, which was seldom. Soon he would change all that, Stern told himself. They had not dared to while Clyde was away.

In the modern living room, Curtis sprawled in his easy chair as though he hadn't moved since they had placed him there. But his air of abstraction seemed to have increased. Before him sat the beast, looking, Stern thought, more like a dog than ever. Its head wasn't cocked to one side, but that, less than its alien appearance, was the one thing to spoil the illusion.

Tires screeched in the driveway while Beryl was still at the telephone. Stern went to the front door, closed it and put the chain

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bolt in place. The back door would still be locked and they would hardly try to force the screen windows.

Heavy steps pounded up the front walk. "Did Dr. Curtis really get back?" The first man shot out. The one who followed had a camera.

"Dr. Curtis has returned," Stern spoke through the opening of the front door which the chain permitted, "but his physical condition won't permit questioning, at least until his doctor has seen him."

"Did he really bring back a Martian? We want to see the Martian anyway."

"We can't have Dr. Curtis disturbed in any way until after his physician has examined him," Stern said bluntly.

"Is he in there?"

"We'll give you a report when we're ready."

A SECOND car pulled up to the house as Stern shut the front door and went to check the rear one. When he came back, flashes from the window showed the cameraman was trying to take pictures through the glass. Stern drew the shades.

"Well, poor Schaughtowl, so you had to come with me," Curtis was saying to the monster.

The beast wiggled again as it had on the steps of the machine. A tail to wag wasn't really necessary, Stern decided, when there was so much body to wiggle.

Schaughtowl, as Curtis addressed it, seemed to brighten in the darkened room.

"Poor, dear Schaughtowl," said Curtis gently.

It was unmistakable now—the skin actually brightened and emitted a sort of eerie, luminous glow.

Curtis leaned over and put his hand on what would have been Schaughtowl's neck. The loose skin writhed joyously, and, snakelike, the whole body responded in rippling waves of emotion.

"Gull Lup," the monster—said wasn't the right word, but it was not a bark, growl, mew, cheep, squawk or snarl. Gulp was as close as Stern could come, a dry and almost painful gulping noise that expressed devotion in some totally foreign way that Stern found revolting.

He realized that the phone had been ringing for some time. He disconnected it, and then heard loud knocking.

"It's Dr. Anderson," he heard a man's voice calling impatiently and angrily.

Cautiously, Stern opened the door, but his care was needless. With a few testy remarks, the doctor quickly cleared a space about the door and entered.

He went at once to Curtis, with

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only a single shocked glance at Shaughtowl.

"Where the devil have you been and where in hell did you get that thing?" he asked as he unbuttoned Curtis's coat and shirt.

Since playing with his pet, Curtis seemed more awake. "I went to Mars," he said. "They're incredibly advanced in ways we hardly guess. We're entirely off the track. I just came back to explain how."

"Your friend doesn't look very intelligent," the doctor answered, busy with his stethoscope.

"Animals like Schaughtowl are used for steeds or pets," said Curtis. "The Ladonai are pretty much like mankind, only smaller."

"Why did you stay so long?"

"After I left, the Ladonai told me, they were going to shut off any possible communication with Earth until we advance more. They think we're at a very dangerous animal-like stage of development. Once I came home, I knew I couldn't go back, so I wanted to learn as much as I could before I left them."

"Stand up for a minute," ordered the doctor.

"Not right now," said Curtis. "I'm too tired."

"You'd better get to bed, then."

"I think not. It's merely caused by the difference in gravity and heavier air. The Ladanoi told me to expect it, but not to lie down. After a while I'll try to take a short walk."

SO Clyde wasn't going to die, after all, Stern thought. He had come home with a message, and, remembering the determination of the man, Stern knew he wouldn't die until he had given it. But he had to die. He would die, and who was competent enough to know that it wasn't from the shock of having come home to denser air and a heavier gravity?

There were ways—an oxygen tube, for example. Pure oxygen to be inhaled in his sleep by lungs accustomed to a rarified atmosphere, or stimulants in his food so it would look like a little too much exertion on a heart already overtaxed. There were ways.

Stern's scalp tingled unpleasantly, and he saw the Martian looking at him intently, coldly. In that moment Stern knew without question that his mind was being read. Not his idea, perhaps, but his intent toward Curtis. The Martian would have to be attended to first.

"Is it true, Dr. Anderson? Will he be all right?" Beryl was sitting on the arm of the chair next to Schaughtowl, and she was looking at Clyde almost as adoringly as the Martian. A few hours had undone all that Stern had managed to do in four years.

If Stern had been uncertain,

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that alone would have decided him.

"I think so," said the doctor. "He seems to be uncomfortable, rather than in pain. I'll send you a prescription for his heart, if he breathes too heavily. Be sure, though, not to give him more than one pill in three hours."

"Of course." Beryl was never that solicitous toward Stern.

"And you'll be in quarantine here until the government decides what, if any, diseases he and the Martian may have brought back with them."

"None at all, Doctor." Curtis's voice was markedly more slurred, and he stared intently with unblinking eyes at the blank wall.

"Well, that's something we can't tell yet. We'll have to keep out the press and television men, anyway, because of your health. If I'm not detained, I'll be back tomorrow morning. Call me if there's any change."

On his way out, the physician was besieged by reporters and photographers, baulked of better subjects. Shortly after the doctor's departure, police sirens came screaming up. The men waiting around the house were moved outside the gate and a guard was set at every entrance.

LATER, a messenger came, was interrogated by the police sergeant who took a small package from him and brought it to the house.

"Medicine," the sergeant said, handing it gingerly to Stern. "You can't leave here without permission." And he walked hurriedly away.

This might be the answer. Stern had a good idea of what the doctor had prescribed — something he'd said, for the heart. It must have been pretty powerful, too, for the doctor to warn against an overdose. Two at once might do it. or another two a little later.

But there was Schaughtowl.

"Al," said Beryl, "stay with Clyde while I fix something for him to eat."

She was more beautiful than ever. Emotions, he thought wryly, become a woman; they thrive on them. In a few minutes a woman could change like this. It was enough to make a man lose faith in the sex.

"Certainly," he said easily.

Curtis seemed to sleep with wide open eyes gazing blankly at the far wall. Schaughtowl sat motionless before him, watchful as a dog, yet still like a snake or spider patiently waiting. Didn't the beast ever sleep?

A drink was what Stern needed. He went to the closet and poured a double brandy. He sipped it slowly. As delicious fire ran down his gullet and warmed his stomach, he felt his tension ease and

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a sense of confidence pervade his mind.

He needn't worry. He was always successful, except that once with the stocks. And he had calm nerves.

There were guards out in front now in khaki uniform; the Governor must have called out a company of the National Guard. Stern noticed some state police, too. The house was well guarded on the three sides surrounded by a neat, white picket fence. In the back, the severe drop into the ravine made guards there unnecessary.

It was dark before Dr. Curtis moved. Beryl was watching him; she had little to say to Stern now.

"How about some broth, dear?" she asked Curtis immediately.

Slowly, Clyde's eyes focused on her. He smiled. "Let's try it."

He let Beryl feed him, sitting on a stool beside his chair and being unnecessarily motherly and coddling about it.

For a while after he had eaten, Clyde sat in his chair, looking at Beryl with his new and oddly gentle smile. It seemed to activate some hidden response in her, for she glowed with tenderness.

"I suppose," Curtis slurred, "I ought to try to walk now."

"Let me help." Stern rose and crossed the room.

The Martian rustled like snakes in the weeds, and hissed.

Beryl said without suspicion, "Thank you, Al. I knew you'd do whatever you could for Clyde." And she rested her hand trustingly on his arm.

What was past was past, not to be wept over, not to be regretted.

"Like to walk out in the back for the air?" Stern asked. "The breeze is coming from that direction."

"That will do very well," said Curtis, obviously not caring a bit.

STERN helped Curtis from his chair and supported him under the arm. They went out the back door, the Martian slithering after them. It was cooler in the garden. Stern felt a renewed surge of self-confidence.

"The stars—" Curtis stopped to look upward.

The night was almost cloudless and there was no Moon. The house hid any view of the crowds and the guards holding them back. They were alone in the dark.

Curtis started forward again, with the Martian scraping along behind. It would never let Curtis out of its sight as long as it lived; that much was clear to Stern.

He guided Curtis to a seat close to the ravine, a favorite spot. Always the Martian was a step—or a slither—behind, and when Curtis sat down, Schaughtowl sat be-

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tween his beloved master and the precipitous drop.

Stern picked up a rock from the rock garden and tossed it into the ravine. The Martian did not take his eyes off Curtis. Stern picked up a larger rock, a sharp, pointed one. He was behind the Martian and Curtis was looking away unseeingly into the night.

It was simple, really, and well executed. The beast's skull bashed in easily, being merely thin bones for a thin atmosphere and light gravitation. A push sent it over the edge of the ravine.

Curtis sat unnoticing, and the traffic jam out front created more than enough confusion to drown out any noise from the creature's fall.

Stern's palm stung. He realized that, before the Martian had pitched over the ravine, a suction pad had for a moment caught at his hand. It had done the beast no good, though.

Curiously, the Martian had not guarded itself, only Curtis. Sitting with its back to Stern had really invited attack. The mind-reading ability was just something that Stern had nervously imagined.

The police would not be able to tell his rock from any other. The heavy body, its ungainly movement and thin bones would explain everything. Besides, there was no motive for killing the Martian and what penalty could there be? It couldn't be called murder.

Stern looked at the palm of his right hand, the one that had held the rock. It stung a little, but in the darkness he couldn't see it. A stinger of some kind, like a bee, probably. The hell with it—couldn't be fatal or Curtis would have warned them about it.

The Martian had been walking by the ravine and had clumsily fallen in. He would report it after he had got Curtis back into the house.

Curtis was easy to arouse and didn't seem to miss Schaughtowl. Stern maneuvered him to the living room, where he sank into a chair and fell into his mood of abstraction.

Beryl must be in the kitchen cleaning up, Stern supposed. Perhaps he had better put some kind of germicide on his palm, just to ward off infection.

HE looked at Curtis relaxed in the chair. Clyde suddenly appeared oddly boyish to him, hardly different than he had been in college days. For a moment, Stern felt again the adolescent admiration and fellowship he had felt so strongly then. Don't be stupid, he told himself angrily. This man had the money and the woman that had almost belonged to him.

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MOVING slowly, Stern deliciously savored the aroma of his triumph. On the table was the bottle. Clyde would be easy, unsuspecting, kindly.

It wouldn't be safe to marry Beryl right away, but there could never be any suspicion.

No need to hurry. For a moment he wanted to watch Curtis. He wondered what kind of pictures Clyde was seeing on the blank wall. Martian landscapes? The strange Ladonais? Too bad he hadn't stayed on Mars. Stern couldn't help having a friendly feeling for his old college chum, pity, too, for what must happen to him soon.

This was no way to kill anyone!

He was growing old and soft!

Nevertheless, Curtis *did* have a noble and striking face. Funny he had never noticed it before. It seemed to glow with an uncanny peace.

Unnoticed, the numbness crept from Stern's palm along his right arm, and a prickly sensation appeared in his right leg.

It was funny to read a person's thoughts like this. Love flowed from Curtis like the warm glow from a burning candle. A sort of halo had formed from the light above his head.

Symbolic.

From Curtis came wave after wave of love. He could feel it pulsating toward him, his own heart turn o... it. Yes, Curtis was noble.

Stern sank cross-legged on t... floor beside Curtis and gazed at him. The prickly sensation had ascended from his leg up through his chest and to his neck. But it didn't matter. Now, for a last time, he could feel the spell of that perfect friendship — before the end.

What end? Why should there be any end to this eternal moment?

Curtis noticed him now. Those half-closed eyes were strangely penetrating. They looked him through.

"Well, Al," he said, "so you killed Schaughtowl?"

Stern looked at the kindly, godlike face and loved it.

Killed whom?

"Poor Al," Curtis said. He leaned over and laid his hand on the back of Stern's neck, fondling it much as one would a dog. "Poor old Al."

Stern's heart leaped in joy. This was ecstasy. It must be expressed. It demanded expression. If he had possessed a tail, he would have wagged it. Perhaps there was a word for that bliss. There was, and with immense satisfaction he spoke it.

"Gull Lup," he said.

—LUCIUS DANIEL

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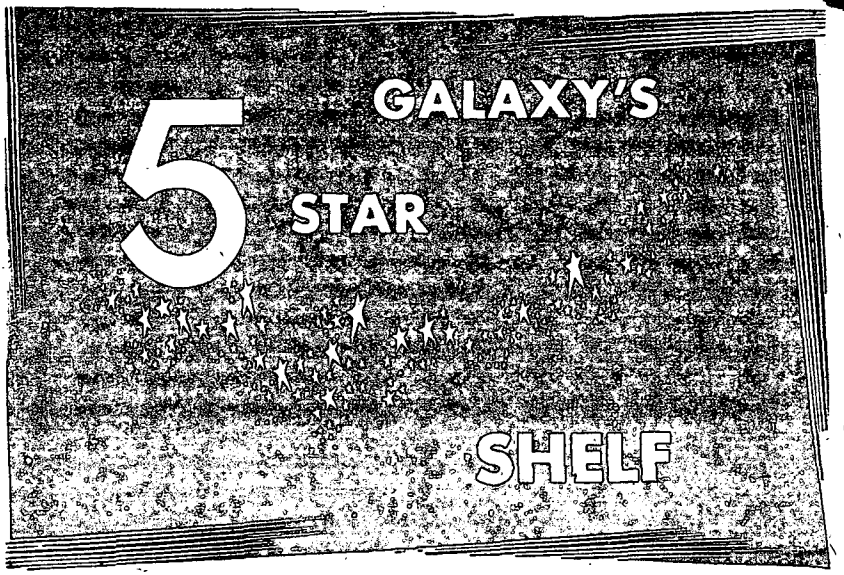

TOMORROW AND TOMORROW and THE FAIRY CHESSMEN, by Lewis Padgett. Gnome Press, New York, 1951. 254 pages, $2.75

IT is shocking to reread these two short novels four and five years after they originally appeared in magazine form. They are as superb as ever—but today they seem grim, bitter, almost psychopathological. (Which is not meant to scare the reader away from them; they are also sheer enchantment to read. That is their paradox.)

"Tomorrow and Tomorrow" states that it is better for humanity to have a war—even an atomic war—than to have scientific and cultural stasis under a "benevolent" dictatorship. The tale tells how a few remaining free minds work to persuade a guardian of one of the world's atomic piles to set it off and thus bring about the chaos which will make it possible to begin scientific research again and get mankind out of its deadly rut.

"The Fairy Chessmen" is concerned with the even grimmer notion that wars are inevitable. Throughout an endless future, which is an integral part of this story through the development of ETP (Extra-Temporal Per-

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ception) in a few unfortunate people, war seems to be the be-all and end-all of man's life, without purpose, without victory, without end. Actually, of course, "The Fairy Chessmen," with all its rich concepts, is still primarily an almost frantic plea against what its author conceives to be the inevitable road to destruction down which modern man is traveling.

Both stories are unreservedly recommended despite their morbid and, to me, indefensible philosophy.

THE CITY IN THE SEA, by Wilson Tucker. Rinehart & Co., New York, 1951. 250 *pages,* $2.50

RARE indeed in science fiction can one complain that something is underwritten. The converse usually is true—a torrent of purple words and no substance.

Here, on the contrary, is an example of a pretty big-time concept being more or less deflated by a somewhat inadequate handling.

Even so, the story is a fascinating one. From its cold and rainy opening in the mist of the female warriors' camp in the Crown Colony of Western Somerset, to its shimmering, sunlit, mirage-protected ending above the mysterious (and never-seen) City in the Sea, far in the unknown western hinterland, it spins a spell.

It is a story of the far future; of a society of women; of the advent of a man and how he led a band of these women to his mysterious City; and why these women were wanted in that City. Yet the whole story seems limp, despite the excellence of its concept. One could wish that its author could have slipped into a sort of unconscious collaboration with someone like Robert Graves, who could have taken this theme and these people and blown the whole thing up into a rich brew of wonderful stuff.

THE OUTER REACHES, Edited by August Derleth. Pellegrini and Cudahy, New York, 1951. 342 *pages.* $3.95

DERLETH'S second 1951 anthology! Its 17 stories are said to have been selected by their authors —the same technique that Margulies and Friend used in their 1949 *My Best Science Fiction Story*. Since none of the stories have been reprinted before, it would have been safer to say that these are their authors' favorite *unanthologized* stories, which is quite a different thing. Even so, at least 9 of the 17 are quality stuff, according to the following ratings:

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"Interloper," by Poul Anderson—fairly effective alien invasion.

"Death Sentence," by Isaac Asimov. Interesting tale, though weak in its ending.

"This Is the Land," by Nelson Bond. Surprisingly grim tale of world's end. Not bad.

"Ylla," by Ray Bradbury. I personally love this tale, but then I'm a notorious Bradburian.

"The Green Cat," by Cleve Cartmill. Run-of-the-mill alien invasion concept.

"Git Along!" by L. Sprague de Camp. I wish I could find this funny, but I can't.

"Service First," by David H. Keller. Fine old haywire classic, very much worth reviving.

"Shock," by Henry Kuttner (originally published under the Padgett byline). A *very* superior time travel story.

"The Ship Sails at Midnight," by Fritz Leiber. Excellent alien invasion in the "Angel's Egg" tradition.

"The Power," by Murray Leinster. Absolutely superb; the alien invader seen through the eyes of the medieval necromancer. The old master at top form.

"The Critters," by Frank B. Long. Good plot, good idea, but painful writing and ending.

"Pardon My Mistake," by Fletcher Pratt. O. Henry takes up space travel.

"Good Night, Mr. James," by Clifford Simak. From this magazine and certainly worth reprinting.

"The Plutonian Drug," by Clark Ashton Smith. Unreadable.

"Farewell to Eden," by Theodore Sturgeon. Well done, but a wee bit incomprehensible to me.

"Co-operate — or Else!" by A. E. van Vogt. Ezwals, Rulls, Rytt killer plants and Prof. Jamieson. Big Fat Stuff on a far planet.

"Finality Unlimited," by Donald Wandrei. Kind of story I just can't read.

A pretty fair average, I would say, as current anthologies go.

SLAN, by A. E. Van Vogt. Simon & Schuster, New York, 1951. 248 *pages,* $2.50

THIS famous "classic," now over eleven years old, has been reprinted by popular demand, and a good thing, too. A little overblown, considerably melodramatic, but still one of the really gripping adventure stories about supermen. It lacks the depth, the perceptiveness, the irony and the satire to be found in the more profound *Odd John,* by Olaf Stapledon (recently reprinted as a GALAXY Novel), but it tells an equally exciting story. Don't miss it.

—CROFF CONKLIN

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She Who Laughs

By PETER PHILLIPS

Illustrated by JONES

It's really a very simple story—if you refuse to believe in ghosts and know that time is circular!

I'D been waiting two hundred years for this guy.

He stood there in the graveled driveway with the estate agent, looking over the frontage of the mansion.

The sun was hot. The agent took off his hat, mopped his balding head. I wondered whether I could spit that far from the upstairs window where I was watching them. I decided I probably could, but I wouldn't.

The agent said, in a thick brogue I can't reproduce in its glottal richness: "If it's se-clusion

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you're wantin', Mr. Mullen, you'd not better this foine upstandin' place this soide of Ballygore. There's room to stretch your legs and fill your lungs with air that shweeps down from the mountains over covert and shweet pasture for your own special delectation and delight."

My lips were moving with his. I'd heard it before. I knew the sucker would take the place. And I knew the agent, back in Thaughbeen, having dropped most of his beautiful stage brogue, would soon be saying: "He's paying in dollars, too, boys. And then, in the season, I'll sell them to the English tourists. This is an occasion to celebrate. Porter all round, on me."

Mullen, casual as all hell, standing there with the agent, pretended to be considering.

I whisked down the baluster-rail, stood just behind the door as they came in.

"Nice hall," Mullen said unenthusiastically. He was wearing a drape suit. He didn't need drapes to bulk him out. Those shoulders had spearheaded the forward line three seasons at college, if my information was correct.

Indignant, the agent said: "Nice? It's talking like an Englishman you are, instead of a citizen o' the greatest country in the world." ("Bar Ireland," he added under his breath.) "Lookit the size of ut—the staircase, the paneling, the great wide windows, and that landin' there where the mighty O'Rourke stood and with the Sword of Kings defied the brayin' cowards o' Cromwell till he was struck a traitor blow from behind, and, like a great-girthed tree smitten in its prime, fell among the cur-dogs and carried a full half-dozen of them to death with him. Here at this very spot!"

The agent flung out a dramatic hand. I'd crept up behind them during the spiel. I never tire of hearing it.

Mullen stepped back. I dodged.

"Fool place to make a stand anyway," he muttered, looking at the balcony between the two staircases.

"Arragh! The O'Rourke could foight as well with the two hands as the one. A sword in each, there he stood, facin' them both ways—"

"Sure, sure. Now how many bedrooms did you say?"

I followed them around. Mullen wasn't interested in bedrooms, only in the cellar. But I was waiting for the final spiel, dictated by what the agent retained of a conscience.

"There's jist one small matter," he said, standing in the hall again after they'd looked the place over. "You may have been hearin'

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ies about this place in Thaughbeen, maybe from those loafers around Golighan's bar, and though I wouldn't be askin' yez to disregard ut entoirely—"

"The haunt, you mean?" said Mullen. I grinned to myself. "I heard about it during the war when I was stationed just across the border. That's when I became interested in the place. I looked it over, saw the power plant. There's quite a head of water in that stream. The memory of that stayed in the back of my mind until the other day, when I was in London with my wife, seeing some friends. Then I remembered this place. I have some work to do. I want electrical power and privacy. So I hopped the jet liner to Dublin and came up here—"

"And you'll take it, sorr? Ghost an' all?"

If Mullen paid extra for a ghost, I thought, he'd be thoroughly had. But he said firmly: "I'm not buying your ghost. In another minute you'll be saying it's an asset to the place. It's a hundred years since my folk left this country, but we haven't gone soft. What's your price for this tumbledown she-been?"

"The final price," said the agent, taking a deep, careful breath, "for a year's tenancy, in advance, in dollars, is—how much did you offer?"

"I didn't. But you can tell your client I'll pay a thousand."

"Don't be shamin' me," said the agent, as I blew a cool breath down his neck. "It's meself that owns the place as you well know, if you know as much as you do."

He drew up his coat collar. "Now let's be discussin' the details elsewhere."

I FOLLOWED them down the drive, into the shay. I could get away from the place now for a while.

It was late afternoon. The green border hills in the distance were drawing up mist from the shadowed bog as their green darkened in the slanting sun; and the new-cut hay in the nearer fields brought relished delight.

Two hundred years I'd waited for this jaunt. I enjoyed every second of it, even the acrid stink from Pethal's ill-cared-for hogs as we passed the holding. The hoppity-clop of the pony's hoofs on the dust-blown road was music.

Over the green-lichened bridge by the trout stream trotted the pony. I promised myself to do some fishing there soon. I'd use a quiet worm and snooze in the sun. Fly-fishing was too strenuous in this moist heat.

And I'd look over my shoulder now and again at the long pile of Thaughbeen House and laugh.

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The laugh would be on me. That always makes it funnier, in Ireland.

Down from the bridge, and the road broadened into the village of Thaughbeen.

The agent introduced Mullen to Golighan. "Stationed in the Six Counties durin' the war," he said, "and mindful of the beauties of the country, and wishin' to do a little book-work or such, decided to take over the place for a year or maybe more. And you'll be wastin' your time, Michael, me boy, tellin' him about the haunt to take the bread out of me very mouth, for Mister Mullen knows all about it."

"Sit down and rest the onaisy tongue of yez," said Golighan, trying to outdo the agent's brogue. "Y'don't think he'd be taken in onyway by yer gabblin', wid a name loike Mullen. What'll you drink?"

Mullen ordered Jamieson's Irish whisky. The agent took thick Dublin stout.

I watched Mullen roll the smokey-peat flavor around his tongue. Two hundred years since I'd had the sweet, rare tang of it tickling my gullet . . .

I licked invisible lips in anticipation.

They stayed through the evening, with the real talk beginning when the lads drifted in.

There was Sean Healey, Tom O'Reilly—both, if I remembered right, working a pittance on Lord Freightowel's estate. Seamas Mulvaney, smallholder — how many times had I seen him, as a barefoot gossoon, nicking plums from the kitchen garden at Thaughbeen House, looking often at the silent, window-eyed place with his own green, feary eyes, and me at an upstairs window holding in my breath not to give one of the ghostly groans I'd practiced so long and send him in a tear-breeches scramble down the tree.

Then there was gutsy Bran Bailey who'd actually come inside one night, stood in the hall and with all his big little heart bawled: "The hell an' back wid banshees! I don't believe in 'em!"

I'd been so pleased with his common sense that I forgot myself and called out the truth: "Good for you, kid. I'm no banshee. I'm no kind of goddam ghost. There's no such things."

But poor Bran was running so fast, I doubted he'd heard me.

Anyway, here he was in Golighan's, grown big and broad, and putting in his two cents' worth about the goings-on at Thaughbeen House.

"It was during the war," Bran said, "and, being so near the border, we had a jeepful of your fellers running in here every night to stoke up on Mister Golighan's

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crew. And one night we tell them about the House, and about how poor daft Johnnie Maur goes up there now and again to play chess with the ghost, as he said. Poor Johnnie, gone eleven months now—"

Johnnie was dead? I'd missed him.

Every time I heard that Johnnie was dead, it shocked me.

He'd stumble into the House, liquored up to the fringe of his red hair, white face vacant and mild, shouting in the empty echoing hall:

"It's a game of chess I'm offerin' yez, for, banshees or not, ye're the only dacent player this soide of Dublin who can tax me wandhering wits!"

I hope Johnnie's found another "dacent player," wherever he's gone.

Bran Bailey was talking on in Golighan's bar, with Mullen leaning forward and taking it all in.

"So one night," says Bran, "the whole near-dozen of 'em starts off up there, with this great roarin' sergeant straddlin' the front and shoutin': 'Look out, ghost, here we come, eight little Yankee boys full of rum!'

"And the jeep goin' so slow with them aboard," says Bran, "and the rain makin' a bog of the road, we follow after these fellers to see what the Thaughbeen House ghost does with 'em.

"And they get halfway up the drive to the house, and the jeep stops, and there's the driver thumpin' and pullin' everything and callin' on all the saints, until the sergeant unstraddles himself and pulls up the front coverin'.

"Then he jist stands there, rain sweatin' off his great red face and him suddenly as sober as a hangin' judge on a Monday, and he says: 'Put it back! Put it back quick before I believe my eyes, and I swear I'll never touch another drop again!' And we come up and look over his shoulder.

"And there's nothing there under the hood. Nothing at all, at all."

I hadn't meant to swipe the the whole motor at first. The teleport exhausted me for days. But I got annoyed when I'd yanked off three plug-leads and that damned jeep kept banging away on one cylinder.

"And never a sight of the motor since," concluded Bran Bailey.

Said Mullen: "Yes. I heard of it. I was captain of their unit. We had to have the jeep towed away."

"So you're not troublin' yourself about the creature at all?" asked Sean Healey.

"Why should I? It's never harmed anybody, far as I can see."

Thanks for them kind words, pal.

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Mullen decided to stay at Goligan's until a few essentials had been carried up to the House. Meantime, he wired his wife to join him.

FOUR days later, he took up residence. He came early. But early. The energy of that man! I was still resting when I heard him poking around in the cellars, tracing through the wiring from the turbo-house.

I slipped down from where I go when I take a rest—don't ask me where that is; it's a state, not a place—and gummed down after him. He was lifting a tarpaulin in a corner of one of the smaller cellars; it used to be a cold-larder.

He looked at the jeep motor and made funny disbelieving noises.

"So," I said, "it wasn't the potheen. I figure you owe the sergeant and the other Company D boys one big-handed apology—plus the dough you docked 'em to pay for it."

He came around so fast, he tripped and planted the tight part of his pants on one of the hobbly bits of the jeep motor.

"What—where are you?"

"Not in heaven or in hell, but just as elusive as the Pimpernel. As to what I am, you're going to tell me, I hope. That's what I've been waiting for—a long, long time. Meanwhile, Mr. Mullen," I said, "you're soiling those nice creased pants of yours."

He upped off the engine, dusted his pants automatically. Something the Army did for him—gave him a pride in his clothes.

"Do you mind," he said, his brain beginning to work, "showing yourself? I hate like hell accepting sartorial advice from a voice without a body."

"That takes energy," I said, "like compressing these air molecules to make sound waves. But it takes a lot of energy and a lot of material and right now I don't feel like dressing up to give you something to look at or talk at. However, I don't mind giving you a slight idea. Scrape some dust off those shelves, toss it up under that bulb, and stand back."

"I am nuts," he enunciated carefully.

"Sure. But do it. And mind your coat cuffs."

As the cloud of tiny particles drifted down, I slipped in and charged them so they hung around the vortices of my anti-particles.

"Almighty catfish!" Mullen gulped. "A naked ghost!"

"I'm no ghost, and I don't have to be this shape, either," I said, adjusting the network. "Is this any better? Dogs are always naked."

He backed off, slapping at the air. "For God's sake, be human

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if you can't be natural! I mean—"

"Listen," I said, peeved, "that was a prize mastiff I once saw. I can always do a mountain lion or a grizzly. Get me a roll of cheesecloth, or even a bedsheet at a pinch, and I'll really show you something."

"I've seen enough," he said, digging knuckles in his eyes and shaking his head as if something was loose inside. "Go away."

"Maybe you're right. I've got more important things to do with my energy than fool around to amuse you."

"*Amuse* me?" He made a noise like an emptying bathtub. "I'd laugh easier in a morgue. Get back where you came from and make the worms laugh."

"I'm not," I repeated patiently, "a ghost, a ghoulie, a banshee, or anything of the whatsoever kind. I've never met up with one and I don't expect to. Like young Bran Bailey, I don't believe in 'em. Neither do you, fortunately. But explanations can wait. Has any of the stuff turned up yet?"

That got him. "What stuff?"

"Couple of tubes from Marshall's of London, specification alloy plates from Birmingham, that dingus you borrowed from the Sorbonne."

"Your intelligence service must be good."

"You'd be surprised."

"Then you tell me where it is."

"I was just making conversation," I said. "It's on the way to Thaughbeen station now. Johnny McGuire will be carting it over around lunchtime. And your wife, who is wondering what in hell you're up to anyway, has reluctantly left her bright friends in London and is on her way to ask why you took over this moth-eaten old shack without consulting her first, especially since it's her money you're fooling around with."

Mullen's lower jaw was nearly resting on his collar by this time.

"Incidentally," I asked, "how is the darling girl? Has she enjoyed the European tour so far?"

"Leave her out of this," he managed to say. But his tone was defensive.

"Poor Mullen," I sighed. "She's still keeping the reins on you, huh? I pity you, feller. I know just how it is. I'm under the Iron High Heel myself. You'll have to meet my wife sometime."

"This is too much! Two of you? Too damned much! A double haunt!" Mullen frowned. Then he began to laugh at his own sudden thoughts. "How do you make out, mister?"

I considered explaining to him, but decided he'd never understand. "Wife" was the simplest way I could describe "her"—the only way in earthly language.

"Your mind needs deodoriz-

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ing," was all I said.

"So does this whole situation. Hey, if these forecasts of yours turn out right, how about giving me the winners at Ballymuchray this afternoon?"

Mullen was recovering pretty quickly, it seemed.

I said: "I don't play the horses. If you've finished down here, you might as well get up to the kitchen and make yourself some coffee. No need to check that wiring any more. I've already done it. You've got a lazy morning ahead."

"The morning," he said, "hasn't yet started. I'm not awake yet."

"So now I'm part of a dream, am I? Get upstairs before I bat you with a clod of hard air."

He muttered his way up to the kitchen, plunked an open pot on the stove, which he'd already lighted. Blue smoke puffed intermittently between the bars, filling the place with pungent haze.

Mullen looked up at the ceiling, addressed it politely: "I suppose, Mr. Fixit, you can tell me what's wrong with this thing?"

"Naturally. Get hold of the poker and belt that flue pipe about halfway up. The plate's jammed and doesn't operate from the outside. Shank broke off way back."

He belted. The fire roared up suddenly.

"Thanks," he said. "Could I interest you in a cup of coffee?"

"Very funny," I grunted sourly.

WHILE he sipped his brew, I slipped out to tell my "wife" how things were shaping up. My wife was born to lay the eggs and crow as well. I'd suffered two hundred years of hell from her tongue. Blamed me for everything. She even beefed about my innocent games of chess with Johnnie Maur.

And I remember when the Marchmont family was in occupation of Thaughbeen House, she'd scare half the life out of little Lilian Marchmont just because I happened to remark casually on her good looks. That gives you a picture of my wife—a possessive shrew, to keep it in human terms which really don't apply very well.

She started in on me now, so I grabbed up the chess board and pieces from the attic and skipped down from the Tenth Plane, where she was lying up and waiting for me to do most of the work.

When I got back to the kitchen, Mullen was tapping at the walls and ceiling with a broomstick.

"No secret panels or hidden amplifiers," I said. "It's all genuine physical phenomena."

He looked round and breathed heavily. "Now I've seen everything."

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I dumped the chess board and pieces on the kitchen table.

"No," he said. "No! I'm not going to confirm myself in my own madness. Take 'em away."

I started setting out the pieces. He watched with a kind of horrible deadpan fascination. In a faraway voice he said: "Queen on her own color."

"That's better," I told him. "Pull up a chair."

He went to the kitchen window, looked at the soft sunlight glancing through the apple trees. He looked for quite a while. Then he shrugged, grabbed a chair and came back to the table.

"Anywhere but Ireland," he observed, "I'd have run halfway to Thaughbeen by now."

Twice during the game, which stretched out over three hours, he tried to make talk, but I dodged the questions. Once he made a grab in the air over my QKt as I was making a move.

"Can you," I asked politely, "feel a magnetic field? Or an air-current, if your hand is moving with it? Or put a half-nelson on a frame of reference? Or poke a De Sitter anti-particle in the eye?"

He gave up.

Finally, as we heard the clattering roar of McGuire's cartage van down the road, he said: "This is the damnedest game, in more than one sense. Check. Hold it until I'm back in this room."

I heard them dumping the stuff into the hall; and a female voice ordering the carter around; and the bland, blarneying voice of McGuire somehow soaring above the authoritative female voice and quelling it.

When Mullen came back into the kitchen, he looked determined. He closed the door carefully behind him.

"McGuire," he said, "is a breath of fresh air. Sanity returns. I've just realized what I've been doing all morning. I have a hell of a lot of work on hand and I can't get on with it until this is straightened out. And I'm not going to have my wife scared. Now just what are you, and what's your racket?"

"Patience, pal," I said. "Finish the game, then I'll talk. I fixed you some fresh coffee." Voices were raised again in the hall. "Incidentally, I don't think your wife scares easy. She's busy for a while anyway. Your move."

He gulped coffee, watched me interpose on his check and threaten his own king simultaneously. He was compelled to exchange pieces, which made it a draw.

"You've been playing for that," he accused.

I sighed. "Not deliberately. If we played a dozen games, they'd end up on a draw. Or a stale-

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mate. One or the other."

"I don't get it. Quit the cross-talk. What are you?"

HE sat more easily in his chair. He frowned at the coffee. I hoped I hadn't laced it too much. He'd get the idea soon enough anyway.

"You've got a couple of books in your bag," I said. "One is a pretty detailed family history of this place, written and published at his own expense—because no one else would be interested—by Mister Patrick O'Rourke, Gentleman, at the turn of the century.

"There are only passing, deprecatory references to me in that. He never took kindly to the idea of a family banshee, or banshees. The other was written twenty years ago by an earnest and sober investigator from the English Psychical Research Society. It's my biography. My wife, being what you'd call plumb lazy, never made an appearance for him. I've often regretted that the Society never got around to following up his report. I'd have shown 'em plenty."

"Then you *are* a haunt," Mullen said. "A plain, ornery haunt! But how do you tick? How do you move things around?"

"A disembodied psyche—" I began.

That got him. He snapped up straight and mouthed for breath. Coffee slopped over the table. It didn't matter. He'd drunk enough for my purpose.

"A disembodied psyche," I repeated firmly, "which is a focus of consciousness freed from hindering matter, and thus from the bonds of inertia and entropy, not to mention sex, can be a pretty powerful thing. It doesn't upset any energy balance because it utilizes extant potentials."

His eyes were growing rounder. He tried to get up, then slumped back.

"You soon master the mechanics of perception for yourself," I said. "It's largely a matter of that curious mental force called imagination. And you learn how to induce illusion in others. But it takes about ten years before you find a way to store enough free energy from cosmic sources in your own field-web of anti-particles to move solid objects around."

He had trouble with his voice. "Ten years? Ten year from *when?*"

"From pretty damn soon," I said sweetly.

"Then you're—you're—" He gulped. His eyes were glazing.

"That's right," I said. "Sleep tight, brother."

I was testing the last circuit when he came around. He opened his eyes and moaned a little.

"Don't worry about the slight

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hangover," I said. "I'll be taking it over in a moment."

He looked around at the setup. Only his head could move. The rest of him was tied pretty firmly in the stasis area.

"Pretty neat, huh?" I said. "It would have taken you months. Years, maybe. It probably did—once. That's something I've never figured out. It took me four hours flat, even with the know-how. I had two hundred years to work it out."

Mullen muttered: "It's a dream."

"Check. That's how the thing started, if it ever did start. With Dunne's theories of precognition and post-cognition in dreams—a freed psyche moving backward and forward in time. Or, as in this case, staying put and letting time flow by. No mass, so no trouble with entropy or inertia. All the paradoxes of time travel smoothed out."

He'd gone bug-eyed again. I could almost see his brain wriggling.

"What happens when I—when you—when this body dies?"

"You answered that question when you devised the math," I said. "Does the past die? No. It's co-existent. Effective immortality."

"But death—"

"Is pretty final," I agreed. "Dust to dust, et cetera. And since we don't believe in an afterlife, that makes it a tough problem. But you've got a couple of centuries to figure that one out, too."

"You mean you have figured it?"

"I didn't. You didn't. We didn't. We never will because we never have."

"How many times has this happened?"

"Once," I said patiently. "This is the first time. It always is."

"But with memory of this conversation, I can change the pattern! I can—"

Then he got the idea. His mouth dropped open. Slack-jawed dope . . .

"That's it," I said. I felt sorry for him, as usual. "You've already tried everything. You can't even leave the place until this turns up." I prodded his stomach. "It's the only body our psychic matrix will fit into, and there's a psychic compulsion to stay right here until it arrives. You can't lick time. You never could."

I STOOD by the switch. The tubes began to heat up.

"No!" he yelled. "Hold it! About my wife—"

"Our wife," I corrected him, looking around cautiously. This time I might get away with it. Maybe the pattern wouldn't always be the same. It was worth

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trying anyway. "You'll find her on the Tenth Plane when you figure out how to get there."

I gave him the wave-off sign. "I've got a date with a bottle of Jamieson's Irish whisky and a fishing rod. By the way, when you meet up with old Johnnie Maur again, give him my love. He won't understand. He never does. Look out for his rook game in the end-play. So long, sucker," I said. "Good haunting."

I WAS reaching for the switch, when—

"Hold it or I'll blast you!"

I sighed resignedly and looked at the cellar steps. A body slumped inelegantly into view, dangling like a puppet from invisible strings.

The voice came from above its head.

How I hate that voice!

"Dear, sweet Bernie," cooed my wife dangerously. "Trying it again? Don't you ever learn? If you touch that switch before my say-so, I'll fry that body of yours as soon as spit in your eye."

Mullen choked: "That's Betty!"

"Uh-huh," I murmured. "And that's Betty's body. She wants it back. I always try to leave her behind, but I guess I never succeed. I'd like to try living with a wife I haven't lived with for two hundred years. But she's spent months soaking up energy on the Tenth Plane, and if I don't play ball, she'll burn my body before I get it."

"How right, darling," said Betty. Arsenic and molasses in that voice. "Now tie this down in the stasis field."

I looked at the limp, blonde head and laughed. "I suppose you whanged her with the skillet again?"

"That's my headache," the voice snapped.

"Right! That's why I'm laughing, sweetheart."

I laid Betty's unconscious head near Mullen's—that is, near my shoulder. She stirred a little and moaned. I passed ropes over her and through the ring-bolt of the time lock and stood back admiring the scene.

"Don't we look sweet?" I said.

"Beautiful," said Betty. "Now pull that switch."

I went to the handle.

"No—" pleaded Mullen.

"Yes," ordered Betty.

I pulled.

For a milli-second, a soft, impossible wind soughed through intergalactic nothingness. A condition of no-life. Binary stars flamed into view. Incorporate with a star, become corporeal, or cease. An incredible longing, fulfilled at its conception. Homing to this star—No! Get out! Occupied! Incorporate or cease!

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THE time lock snapped open, and ropes loosened round my body.

Body.

Beautiful word.

Even with a headache like this.

Headache!

I gave a little scream and sat up.

Mullen—I mean me—I mean Betty—stood there grinning like an ape.

"Beat you to it, heel," she—he said.

I'd been wrong about the psychic matrix.

That damned woman had always wanted to wear the trousers. Now she was wearing them, the ones that should have been mine.

A little thing like the sex of the body I inhabit shouldn't really matter, of course. Sex doesn't actually apply to me, as such. But . . .

Anybody know where I can get some nylons?

—PETER PHILLIPS

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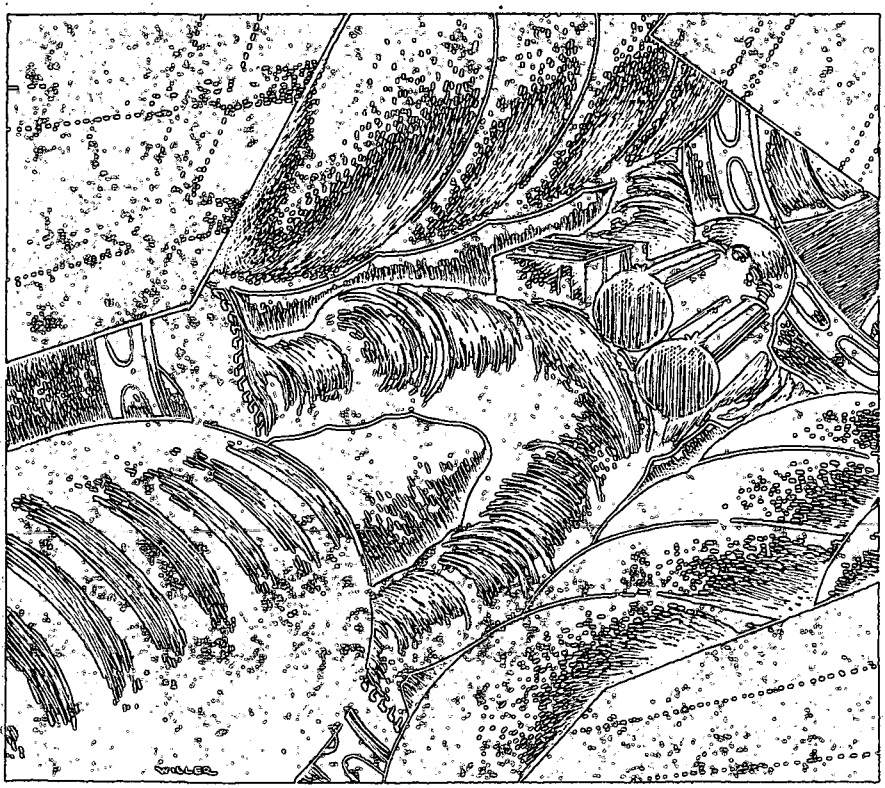

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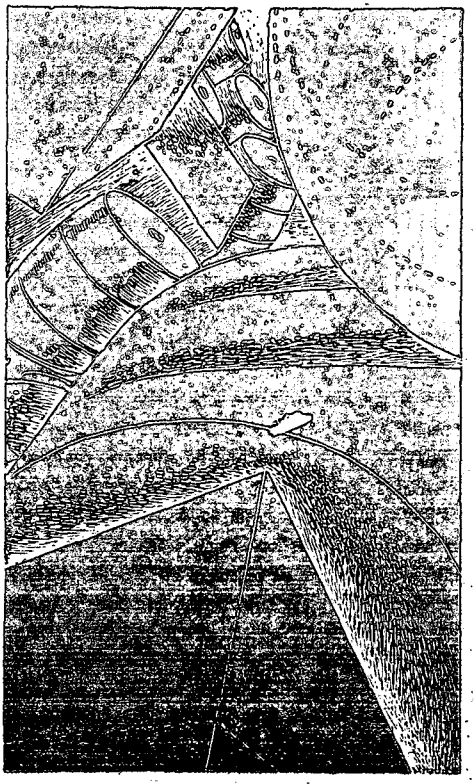
By
DAMON KNIGHT

Illustrated by WILLER



RICHARD Falk was a sane man. Up until three weeks ago he had been, so far as he had been able to discover, the only sane man left in a world of lunatics.

Now he was a dead man.

He lay in a metal coffin twenty yards long by three wide, airless, soundless. Behind the faceplate of his helmet, under the rime of sub-zero air, his lips were bright blue, his cheeks, nose, forehead a lighter color, almost violet. The flesh was stiff as frozen leather. He did not move, breathe, or think; he was dead.

Beside him, strapped to the bulging torso of his suit, was a metal box labeled:

SCATO HEART PROBE
See Instructions Inside

All around him, strapped tight to the walls by broad loops of webbing, were boxes, cannisters, canvas bags, kegs. Cargo. His coffin was a freighter, going to Mars, and he was a frozen stowaway aboard it.

In his brain the memories were neatly stacked, just as he had left them, not coupled now, each cell isolated, the entropy of his mind fallen to zero. But uppermost among them, waiting for the thaw that might never come, were the memories of his last few hours of life.

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Once the ship was launched nd free, after he had slipped into , he had had to wait until its lancing molecules had stilled, eir heat all radiated away into pace. Then to wait again, heater urned off, listening to the silence hile his own life's heat drained way: fingers and toes numb first, ars and nose following, then lips, heeks and all his flesh. Shivering n an agony of cold, he had vatched his breath fill the helmet vith cloud, the cold drops bead- ng on the colder faceplate.

Tricky business, one that demanded courage. Act too soon, nd the final drop into stillness vould be too slow — the freezing iquids in his body would crystalize, gashing his cells with a nillion tiny ice needles. Wait too ong, and the cold would steal his utonomy: the order would go out along his dendrites, "Act!" nd there would be no response.

He had waited until the false warmth of the dying had crept over him, the subtle destroyer cumbering his limbs not with harshness but with too much peace. Twisting then in the dead center where he floated, he had drawn himself into the lane between two looped bundles of cargo, forcing them aside, until he reached the naked hull. There, spread-eagled against the chill metal, embracing it as one who crucifies himself glady, he died.

The ship, stillest of sepulchers, hung fixed in the center of the starry globe. So it might have remained for time without end, changeless, knowing no time, for there was no time here. The ship and all its contents — except its robot control, inactive now but warmed by a minute trickle of electrons — were very nearly at zero absolute.

A RELAY clicked, communicating tremor through support frame and girder and hull. Time had begun again. The radar assembly in the prow began to emit timed clusters of radiation. Presently other relays snapped over, and then the engine awoke, whispered to itself an instant, and was silent. For an instant the ship had become once more a thing in motion, a pebble flung between the stars. Another such instant came, and another; then, at long last, the hull shuddered to the whip and carom of atmospheric molecules. Lightly it dipped into Martian air, out again, in again, making a great braking circuit of the globe. A final relay clicked, and Falk's coffin of a freighter hurled itself groundward, free of the skeletal ship whose rockets now flamed again, driving it back into the timeless deep.

A parachute opened as the cargo hull hurtled downward: a preposterous parasol that would

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not have held the weight for a minute against Earth's gravity, in Earth's air. But here it slowed that plummeting fall until the box met Martian sand not quite at killing speed.

In the shell of the motionless freighter, Falk's corpse slowly thawed.

HIS heart was beating. That was Falk's first conscious realization, and he listened to the tiny sound thankfully. His chest was rising and falling in a deep, slow rhythm; he heard the hiss and whisper of breath in his nostrils, and felt the veins pulse at his temples.

Then came a prickling half pain in his arms and legs. He saw a ruddy haze of light on his closed lids.

Falk opened his eyes to a pale glow that turned itself into a face. It went briefly, then came back. Falk could see it a little better now. Young, about thirty, pale-skinned, with a blue beard-shadow. Black, straight hair, a little untidy. Black-rimmed spectacles. Ironic lines on either side of the thin mouth.

"All right now?" said the face.

Falk murmured, "Think so."

The young man nodded. He picked up something from the bed and began talking it apart, fitting the components into the cushioned troughs of a metal box. It was the heart probe, Falk saw: the bulky control box, the short, capillary-thin needle.

"Where did you get this?" the young man asked. "And what the devil were you doing aboard that freighter?"

"Stole the probe," mumbled Falk. "And the suit, and the rest of the stuff. Dumped enough cargo to match my weight. Wanted to get to Mars. Only way was to stow aboard." "You *stole* it?" the man repeated incredulously. "Then you never had the analogue treatment?"

Falk smiled, "Had it, all right. Dozen times. Never took." He felt very tired. "Let me rest a minute, will you?"

"Of course. Sorry."

The young man went away, and Falk closed his eyes; he went through those last hours once, painful as they were, and then again. There was trauma there; mustn't let it get buried, to cause him trouble later. Accept it, know the fear, live with it.

After a while the young man came back, carrying broth that steamed in a cup, and Falk drank it gratefully. Then he fell unknowing into sleep.

When he awoke, he was stronger. He tried to sit up and found, to his mild surprise, that he could. The other, who had been sitting in an armchair across the room, put down his pipe and came over

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to thrust pillows behind Falk's back. Then he sat down again. The room was cluttered and had a stale odor. Floor, wall and ceiling were enameled metal. There were books and rolls of tape, records, in shelves; more piled on the floor. A dirty shirt was hanging from the doorknob.

"Want to talk now?" the young man asked. "My name's Wolfert."

"Glad to know you. Mine's Falk. You want to know about the analogue business first, I suppose."

"And why you're here."

"They're the same thing," Falk told him. "I'm immune to analogue treatment. I didn't know it for sure till I was ten, but I think I was born that way. From seven on, I remember the other kids talking about their Guardians, and me pretending I had one, too. You know how kids are — anything to be part of the gang.

"But for a long time, years, I wasn't certain whether everyone else was pretending like me, or whether I really was the only one without an invisible Guardian to talk to. I was pretty sure the kids were lying when they said they could see theirs, but whether they were there at all, or not was another question. I didn't know; actually it didn't bother me much. A kid that age doesn't distinguish readily between fact and fantasy.

"When I was ten, I stole something. It was a book I wanted, which my father wouldn't let me have. The clerk was looking the other way; I put it under my jacket. Funny, I was halfway out before it struck me that I'd just proved I had no Guardian. By that time, you see, I'd decided that I'd just never seen mine, because I'd never done anything bad. I was proud of that, a little prissy about it if you want the truth. I only wanted this book. . .

"I had sense enough, thank God, to burn that book after I'd finished reading it. If I hadn't, I don't suppose I would have lived to grow up."

"Should think not," Wolfert said, his eyes fixed on Falk, alert, wary. "One man without any control could turn the whole applecart over. But I thought immunity was theoretically impossible."

"I've thought about that a good deal. According to classic psychology, it is. I'm not unusually resistant to hypnotic drugs; I go under all right. But the censor mechanism just doesn't respond. I've had the notion that I may be a mutation, developed in response to the analogue treatment as an anti-survival factor. But I don't know. As far as I've ever been able to find out, there are no more like me."

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"Umm," said Wolfert, puffing at his pipe. "Should think your next move would be to get married, have children, see if they were immune, too."

Falk stared at him soberly. "Wolfert, can you imagine yourself settling down happily in a community of maniacs?"

THE other's face flushed. He took the pipe out of his mouth, looked down at it. Finally he said, "All right, I know what you mean."

"Maybe you don't," said Falk, thinking, *I've offended him. Couldn't help it.* "You've been out here ten years, haven't you?"

Wolfert nodded.

"Things are getting worse," Falk told him. "I've taken the trouble to look up some statistics. They weren't hard to find; the damned fools are proud of them. The number of persons in mental institutions has gone steadily down since 1980, when the worldwide analogue program got under way. Extension of analogue program has gone steadily up. The two curves cancel out perfectly.

"There are fewer and fewer people who have to be put away in madhouses — not because of any improvement in therapy, but because the analogue techniques are getting better and better. The guy who would have been hopelessly insane fifty years ago now has a little man inside his head, controlling him, making him act normal. On the outside, he *is* normal; inside, he's a raving madman. Worse still, the guy who would have been just a little bit cracked, fifty years ago — and gotten treatment for it — is now just as mad as the first guy. It doesn't matter any more. We could all be maniacs and the world would go on just as before."

Wolfert grimaced wryly. "Well? It's a peaceful world, anyhow."

"Sure," said Falk. "No war or possibility of war, no murders, no theft, no crime at all. That's because every one of them has a policeman inside his skull. But action begets reaction, Wolfert, in psychiatry as in physics. A prison is a place to get out of, if it takes you a lifetime. Push one plunger down, another will rise. Just a few years more, I think — ten or twenty, say — and you'll see that madhouse curve rise again. Because there's no escape from the repression of the Guardians except a further retreat into insanity. And eventually a point is reached where no amount of treatment can help. What are they going to do then?"

Wolfert tamped his pipe out slowly and stood up. "Meaning the psychiatrists who really govern Earth, I suppose. You've evidently figured out what you're

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going to do about all this."

Falk smiled. "Yes. With your help, I'm going to the stars."

The other stood frozen a moment. "So you know about that," he said. "Well, come into the next room. I'll show it to you."

FALK had known about the Doorway, but not that it looked like this. It was a cubicle of something that looked like slick brown glass, ten feet high, six wide and deep. Inside, at waist level on the far wall, a lever, curiously shaped, like the head of an old-fashioned walking-stick, the slightly curved bar of the L parallel to the wall. Nothing more than that. The floor of Wolfert's hut had been assembled around it. It was the reason for the hut's existence, for Wolfert's dearly bought presence on Mars.

"So that's it," said Falk. He took a step forward.

"Stay where you are," Wolfert said sharply. "The area in front of the entrance is boobytrapped."

Falk stopped and looked at Wolfert, then at the metal cabinets bolted to the floor on either side of the Doorway. Now that he looked at them closely, he could see the lenses of black-light beams, and above them, metal ones that he guessed were discharge points.

Wolfert confirmed it. "If anything ever comes out, the current is supposed to get him. If it doesn't, I'm here." He put his hand on the rapid-fire automatic at his belt.

Falk sat down slowly on a bench next to the wall. "Why are they so afraid of whatever might come out of the Doorway?"

"You don't know the whole story, then. Tell me what you do know and I'll fill in the gaps."

"The first Mars expedition, in '76, found it here. Apparently it was known to be an interstellar transportation system, but as far as I could learn, nobody ever actually tried it out. I knew that a caretaker had been left here — your predecessor, I imagine — after the idea of colonizing Mars was abandoned. But I didn't know any of the reasons."

Wolfert grinned briefly and leaned against the wall. "It's a transportation system, all right. Put an object in that cubicle, press the lever down, the object vanishes. So does most of the crowbar or whatever you use to work the lever. *Ffft* — gone.

"We don't know how old it is and have no way of telling. The material it's made of is a hell of a lot harder than diamond. About half of it is underground. That was the way it was found, sitting perfectly level on the surface of the desert. I believe it must have some sort of self-leveling mechanism built into it, so

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that it's always available no matter what changes the surface of the planet goes through.

"Other ruins have been found on Mars, but they're all stone and quite primitive; nothing like this. The first expedition tried to get into its innards and find out what made it go, of course, but they couldn't. You can see in, only there's nothing to see." He gave his quick, ironic smile. "It's frustrating. Makes a physicist feel like a backward student in a kindergarten. We know that it's part of an interstellar network. One man did try it out — a member of the first expedition. He saw the cubicle and the lever, stepped in and pressed it to find out what would happen. *He* found out, all right, but I don't suppose the rest of us will ever know.

"Then the second expedition brought along a batch of powerful all-wave senders and put them through. They picked up the first signal five years later, from the general direction of the star Regulus. Two more after seven years, then four during the thirteenth year, all from different directions. The other eight have yet to be heard from."

He looked at Falk. "Now do you understand? The thing has no selectivity. It's completely random. We could walk through there and step out onto the planet of another star but it might take us a million years to find the way back by trial and error."

Falk leaned back against the wall, trying to absorb the idea. "Maybe there are only a dozen or so stars in the network," he suggested.

"Don't be a fool. Would the race that could build *that* stop at a dozen stars, or a thousand? They owned the Galaxy! Sixty billion stars. According to current theory, all the main ones have planets."

He pointed to the Doorway. "Three hundred sixty cubic feet about," he said. "Enough for one man and supplies for a year, or fifteen people and supplies for a month. That's the limit to the size of the colony we could send out. With no assurance," he added bitterly, "that they'd land anywhere they could live for a minute."

"Frustrating," Falk agreed. "But I still don't see why you're here with a gun. I can understand that if a member of the race that built that thing came through—and I must say it seems unlikely—that would be an important event. But why kill him when he steps out?"

"It isn't my policy, Falk. I only work here."

"I understand that. But do you have any idea what's behind the policy?"

"Fear. They've got too much

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at stake." Wolfert leaned against the wall again, gesturing with his pipestem. "Do you realize that we could have interstellar colonization without this gadget, on our own? Give us a fuel source efficient enough so that we can accelerate continuously for as long as eight months, and we could reach the stars well within a man's lifetime. But do you know why we won't? They're even afraid to plant colonies here on Mars, or on Jupiter's moons, simply because transportation takes too long. Imagine a colony cut off from Earth by a five or ten year trip. Say something goes wrong—a man like yourself, naturally immune to analogue treatment. Or a man who somehow evades the treatment, then manages to take it over, change it. Say he cuts out the one directive, 'You must do nothing against the policy or interests of Earth.' Then you've got two communities again, not one. And then?"

Falk nodded soberly. "War. They don't dare take even the smallest chance of that."

"It isn't a question of daring; they *can't*. That's one of the directives in *their own* conditioning, Falk."

"So we'll never get to the stars."

"Unless," said Wolfert, "somebody comes through that Doorway who understands how it works. The voltage is high, but not high enough to kill—humans, that is. He's supposed to be stunned, and if the current doesn't stop him and he tries to get back into the Doorway, I'm supposed to shoot to cripple. But at all events, he isn't to be allowed to go back and warn others to stay away from this station. Because if we knew how to alter the system so that it would be selective—"

"Then we'd have colonies," finished Falk. "Every one just around the corner from Earth. All just alike. The loonies shall inherit the Universe. . . I hope nobody ever comes through."

HE prowled the rest of the cabin with Wolfert, resting at intervals until his strength returned. There wasn't much to see: the Doorway room, with a spy-hole Falk had not noticed between it and the bedroom; the room that housed radio, radar and the computer that controlled the grazing orbits of the supply rockets; the power plant, and the compressor that kept the cabin's air at breathable pressure; kitchen, bathroom, and two storage chambers.

The radio room had a window, Falk stood there a long time, looking out over the alien desert, violet now as the sun dropped toward the horizon. Stars glittered with unfamiliar brilliance in the

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near-black, near-vacuum sky.

In his mind he sketched hairlines of fire across the sky, a cat's-cradle of stars. The thought that tomorrow he would be standing on a planet of one of those suns was frightening, but at the same time it lured him. He felt like

Wolfert said abruptly, "You haven't asked me whether I reported to Earth when I found you in that freighter shell."

Falk looked at him. "I'll be gone long before they can do anything about me."

"What made you so sure that

a boy standing on the edge of an unsounded pool, whose black waters might hold treasure or death: he was afraid to dive, and yet he knew that he must.

How could a man feel otherwise, he wondered, knowing that the way was open, that he had only to step forward?

I'd be—sympathetic?"

"You're a volunteer. They haven't got to the stage of conditioning people to do jobs they don't want to do, though I suppose they will eventually. You're a hermit. You don't like the madhouse they're making out of Earth any more than I do."

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"I don't know," said Wolfert. "Perhaps you're assuming too much similarity. I don't feel as you do about the analogue system, or the present government. I can see that it will lead to disaster eventually, but that doesn't bother me much. I'll be dead. But I want the stars. That's an emotional thing with me. . . There are no slugs in these cartridges." He indicated the gun at his hip. "Or in any of the ammunition I've got. They didn't condition me against that."

"Look," Falk said abruptly, "you've got a directive against stepping through that Doorway. Is that right?"

The other nodded.

"Well, but is there any reason why I couldn't knock you over the head and drag you through?"

Wolfert smiled wryly, shaking his head. "Somebody's got to stay at this end."

"Why?"

"Because there's a chance that you'll find the secret out there, somewhere. That's what you're hoping, too, isn't it? You're not just looking for a place to hide—you could do that in a thousand places on Earth. You're after knowledge, and in spite of what I've told you, you're hoping you'll be able to bring it back and make the Earth over."

"It sounds a little Messianic," said Falk, "but you're right."

Wolfert shrugged, letting his gaze drift away again. "Well, then, there's got to be somebody here. Somebody with no slugs in his gun. If I went with you, they'd take good care to send a different sort of man next time." He met Falk's eyes again briefly. "Don't waste time feeling sorry for me. You may not believe it, but I'm quite happy here. When I'm alone, that is."

Falk had been wondering why the government had not sent a married couple instead of a single man, who might go mad from sheer loneliness. Now it struck him that he had been stupid. When a man has a wife, he's no longer a hermit. After a moment Falk said, "Wolfert, I like you better than any man I've ever met. I hope you'll believe that."

Wolfert hauled out a pipe-cleaner, a complicated thing of many hinged stems, the free ends stamped into shovel-shapes, tamper-shapes, probes. He said, "I'm afraid I dislike you, Falk, but it's nothing personal. I hate your guts because you're the master of your own mind."

He turned and put out his hand, grinning. "Aside from that, I think you're a great guy."

Falk gripped his hand. "I hope you're here when I get back."

"I'll be here," said Wolfert, scraping his pipe bowl, "for another thirty-odd years, barring

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accidents. If you're not back by then, I don't suppose you'll be coming back at all."

II

AT his suggestion, Falk put on one of Wolfert's light Mars suits instead of the spacesuit he had worn in the freighter. The latter, designed for heavy-duty service in the orbital space station that circled Earth, was, as Wolfert pointed out, too clumsy for use on a planet's surface. The lighter suit furnished adequate protection in thin atmosphere, and was equipped with gadgetry that the other lacked: a headlamp, climbing gear, built-in compass, and food, water and disposal devices. It carried air tanks, but also had a compression outfit—which, given an atmosphere at least no poorer in oxygen than that of Mars, would keep the wearer alive for as long as the batteries held out.

"You'll have to find a place where you can live off the land," said Wolfert. "If all the planets you hit should happen to be dead, so will you be, very shortly. But this suit will give you longer to look, at least. I'd give you this gun, but it wouldn't do you any good without ammunition."

He disconnected the boobytrap and stood aside as Falk went to the entrance of the doorway. Falk took one last look around at the bare metal room, and at Wolfert's spare figure and gloomy face. He stepped into the brown-glass cubicle and put his gloved hand on the lever.

"See you," he said.

Wolfert nodded soberly.

Falk turned on his helmet lamp, rested his free hand near the control box at his belt and pressed the lever down.

Wolfert vanished. An instant later Falk was aware that the lever was no longer beneath his hand. He turned, dazedly, and saw that it was back in its original position.

Then he remembered the curious blank that had taken Wolfert's place, and he turned again to the entrance. He saw gray-white blankness, featureless, uncommunicative. Was this some kind of intermediary state? If so, how long did it last? He felt a surge of panic as he recalled that it was only assumption that the journey was instantaneous, and another as he thought of the eight transmitters that had never been heard from.

He gripped the edge of the doorway and bent forward, looking downward, seeing only a chaos of dim colors of which his eye made nothing. Then he saw the cliff, and all the rest of the scene fell into perspective.

He stood at the top of a sheer

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mountain—an impossible, ridiculous height. Whatever was at the bottom melted into a meaningless tapestry of grayed color. He looked to right and left, and saw nothing else. No sound came through the diaphragm of his helmet. He had only the tactile and muscular responses of his own body, and the hard reality of the Doorway itself, to assure him that he was real and alive.

The planet was dead. He felt irrationally sure of it. There was not even a whisper of wind; only the featureless blanket of gray cloud, the cliff, the meaningless colors below.

He looked at the kit slung to his belt: the pressure gauge, bottled litmus papers, matches. But there was no point in testing this atmosphere. Even if it were breathable, there was no way of getting out of the Doorway, for the cliff began not more than an inch from the entrance.

Falk went back to the lever, pressed it down again.

This time he watched it as it reached the end of its stroke. There was no hint of transition. The lever was there, under his hand, and then it was back in the starting position.

He turned.

Deep blue night, blazing with stars. Underneath, a flat blue-green waste that ran straight away into the far distance.

Falk stepped out onto the icy plain and looked around him, then upward. The sky was so like the one he had known as a boy in Michigan that it struck him almost as a conviction that this terminus was on Earth—in the Antarctic, perhaps, near the pole, where no explorer had ever happened across it. Then, as he looked automatically for the Dipper, Orion's Belt, the Southern Cross, he knew that he was wrong.

Directly above him was a group of eight stars, two of them very brilliant, four arranged in a straight line, the rest spread out in an almost perfect semicircle. Falk knew that if he had ever seen that constellation before, he would not have forgotten it.

Now he looked down toward the horizon, blacker than the sky. How could he know that light, warmth, safety, knowledge were not hiding just beyond the curve of the planet?

He turned back to the cubicle. He was here on sufferance, a man in a Mars suit, with weeks—or, with great luck, months or years—to live. He had to find what he sought within a pitifully small radius from the Doorway.

Down went the lever again. Now it was still night, but when Falk went to the Doorway, he saw an avenue of great buildings under the stars.

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The air pressure gauge came out for the first time, low, but the compressor could handle it. The litmus papers—negative. The match burned weakly, and only for an instant, but it burned.

Falk started the compressor and shut off the flow of air from the tanks slung at his back. Then he turned on his helmet light and marched off down the avenue.

PYRAMID, cone, and wedge-shape, the buildings all sloped away as they rose, so that, for all their enormous bulk, they did not hide the sky. Falk looked up when he had taken a few steps, unreasonably expecting to see the half-circle constellation. But it was not there, and he realized with a shock that for all he knew, he might be halfway across the Galaxy from the spot where he had stood five minutes ago.

He drew a picture of the Galaxy in his mind, an oval lens of stars against blackness. Near one focus of the ellipse he put a dot of brightness that stood for Sol. Then he made another dot, and drew a shining line between them. Then another dot, and another line; then another. They made a sprawling letter N across the misty oval.

It was incomprehensible. A race that could span the Galaxy, but could not choose one destination from another?

The only other alternative was that there was some function of the Doorway which men had failed to grasp, some method of selection that evaded them, as a savage might be bewildered in a modern tubeway system. But Falk's mind rejected that. The mechanism was simple, clear. A cubicle and a lever. Function is expressed by shape and the shape of the Doorway said "Go." It did not say "Where?"

He looked again at the buildings. The upper quarter of them, he saw now, was badly eroded: layers inches deep had been eaten away. He glanced at the fine orange sand that paved the avenue and saw that it filled doorways almost to the top.

The space between the sand and the tops of the doorways was narrow, but he thought he could squeeze through. He picked out one, centering it in the brilliant disk of his headlamp, and stood there, in the middle of the avenue, reluctant to move.

He glanced back at the cubicle, as if for reassurance. It was still there, comfortably clear and sharp-lined, timeless. Now he realized what was troubling him. This city was dead—dead as the planet of the cliff, or the planet of ice. The buildings were stone; they had crumbled under the weather.

Their makers were dust.

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He had agreed with Wolfert that he was on a quest for knowledge, that he hoped the Doorway would eventually take him back to Sol, armed with knowledge, ready to remake the world. But it wasn't true. That had been his conscious idea, and it was a dream, a self-delusion, an excuse.

He had no love for Earth, no conviction that humanity must be rescued. If that force had driven him, there would have been no logic in leaving. He could have stayed, worked himself into the governing elite, organized a change from within. His chance of success would have been small, but there would have been a chance.

Yes, he might have done it, and for what? Uncontrolled, mankind was not fit to colonize. Controlled, it dared not take the risk.

But there had been another civilization that had been worthy of the stars, for it had conquered them. Falk did not believe it was dead. Stone crumbled, metal rusted, yet the Doorways still lived, still functioned, defying time. But that race was not here; it had left no trace of itself except the Doorway.

Without another glance at the buildings around him, Falk turned and went back to the brown-glass cubicle.

When he was three yards away from it, he saw the footprints.

There were five of them, lightly impressed into the sand near the Doorway's entrance. Even with a careful search, Falk could not find any more. Two, apparently, pointed away from the cubicle; the other three were the returning trail, for one overlapped one of the previous set.

They were smaller than Falk's booted prints, oval, slightly flattened along the sides. Falk stared at them as if the mere act of looking would make them give up more information, but they told him nothing.

They were not human. What, though, did that prove?

They could be the trace of a Doorway builder. Or they could have been made by a wanderer like himself.

The bitterest thing of all was that, having found the trail, he could not follow it. For it led through the Doorway — to any one of sixty billion suns.

Falk stepped into the cubicle and pressed the lever down once more.

III

WHITE light sealed his eyes with pain, and there was a vicious torrent of heat. Gasping, Falk groped frantically for the lever.

The after-image faded slowly.

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He saw night again, and the stars. That last one, he thought, must have been the planet of a nova. How many of those was he likely to run into?

He stepped to the Doorway. A wasteland: not a stick, not a stone.

He went back to the lever. Light again, of bearable intensity, and a riot of color outside.

He saw a bright landscape under a tropic sun—gray-violet mountains in the distance, half-veiled by mist; nearer, tall stalks that bore heavy leaves and fronds of a startling blue-green; and directly ahead of him, a broad plaza that might have been cut from one monstrous boulder of jade. On either side were low, box-shaped structures of dark vitreous material: blue, brown, green and red. And in the middle of the plaza stood a group of slender shapes that were unquestionably alive, sentient.

Falk's heart was pounding. He stepped behind the shelter of the entrance wall and peered out. Curiously, it was not the cluster of live things that drew him, but the buildings on either side.

They were made of the same enduring, clean-edged substance as the Doorway. He had come, by blind chance, to the right place at last.

Now he stared at the creatures grouped in the middle of the plaza. For some reason, they were disappointing. They were slender S-shapes, graceful enough in repose; lizard-shapes, upright on two legs; pink of belly and umber of back. But in spite of the bandoliers slung from their narrow shoulder, in spite of their quick, patterned gestures as they spoke together, Falk could not convince himself that he had found the people he sought.

They were too manlike.

One turned away while two others spoke; came back leaning at a passionate angle, thrust himself between the two, gesturing wildly. Shouted down, he again left, and stalked a half-circle around the group. He moved as a chicken moves, awkwardly, thrusting his long neck forward at each step.

Of the five others, two argued, two merely stood with drooping, attentive heads and watched; and the last kept a little apart, gazing around him disdainfully.

They were funny, as monkeys are funny because they resemble men. We laugh at our mirrored selves. Even the races of man laugh at each other, when they should feel compassion.

They're tourists, Falk thought. *One wants to go to the Lido; another insists they see the Grand Canal first; the third is furious with both of them for wasting time; the next two are too timid*

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to interfere, and the last one doesn't care.

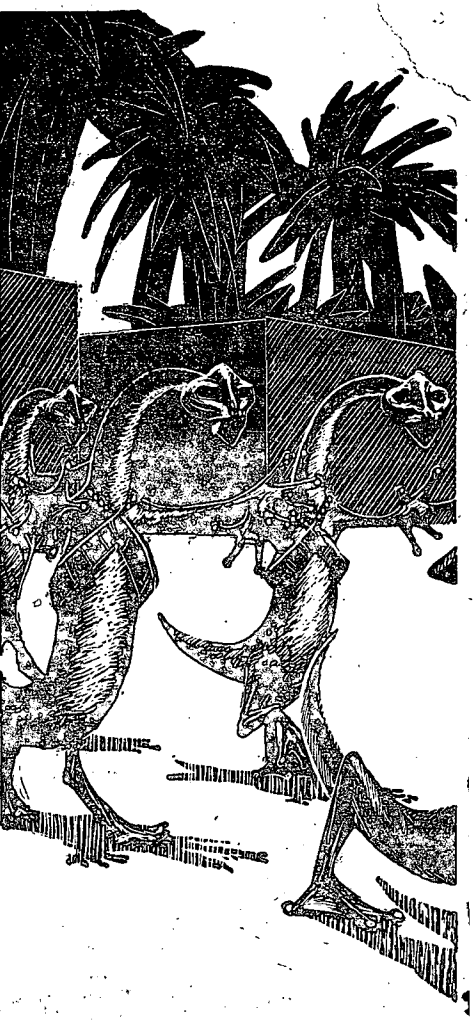
He couldn't imagine what their reaction to him would be. They might want to take him home as a souvenir. He was anxious to get into those buildings, but he'd have to wait until the creatures were out of sight.

While he waited, he got out his atmosphere testing kit. The pressure gauge showed a trifle less than Earth normal; the litmus papers did not react; the match burned cheerfully, just as it would have on Earth. Falk cracked the helmet valve cautiously and sniffed.

After the stale air of the suit, the breath he inhaled was so good that he could almost taste it. It was fresh, faintly warm, and sweet with flower fragrance. Falk opened the helmet seam, tipped the helmet back and let the breeze wash over his face and hair.

He peered out, and saw with sudden dismay that the party was trooping directly toward him. He ducked his head back inside, glanced instinctively at the lever, then looked out again.

They were running now; they had seen him. They ran very clumsily, heads darting strenuously forward and back. The one in the lead was opening and shutting his triangular mouth, and Falk heard faint yawps. He



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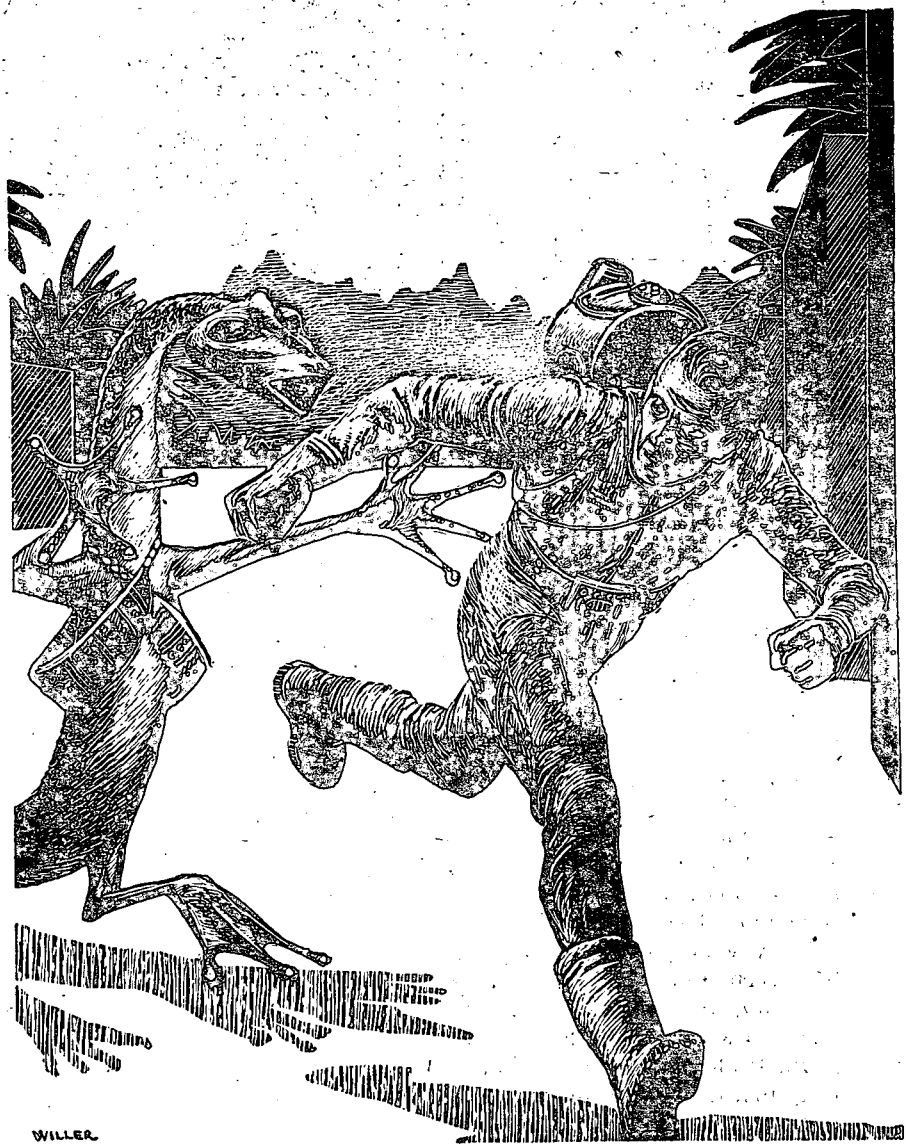

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leaped out of the cubicle, cut sharply to the right, and ran.

The nearest building with a visible opening, unfortunately, was some distance down the line, between the lizards and Falk. He glanced back when he was halfway there. The lizards were considerably strung out now, but the leader was only a few yards away.

They were faster than they looked. Falk put his head down and tried to make his heavy boots move in a sprint. Almost to the door, he looked back again. The lizard was one jump away, ball-tipped fingers outspread.

Falk turned in desperation and, as the lizard came up, swung a knotted fist to the point of its snout. He heard its steam-whistle screech, saw it collapse, and then he was diving through the open door ahead.

The door closed gently behind him—a sheet of glassy substance, the same blue as the walls, gliding down to seal the opening. Through its transparency he could see the dark shapes of the lizards crowding around, leaning to pry at the bottom of the door, gesticulating at each other. It was plain, at any rate, that the door was not going to open for them.

Whether it would open for him, when he wanted it to, was another matter.

He looked around him. The building was a single room, huge, so long and deep that he could barely see the far walls. Scattered over the floor were boxes or chests, racks, shelves, little ambiguous mounds. Nearly all the objects Falk could see were fashioned of the same glasslike material.

There was no dust in the room; but now that Falk thought of it, he realized that there had been none in any of the Doorways, either. How that was done he could not conjecture. He went to the nearest object, a file or rack, formed apparently to take many things of diverse shapes and sizes. It was a quarter empty now, and the remaining contents had a jumbled look.

He picked up an orange-glass spindle, full of embedded threads, or flaws, that looped in a curious pattern from one end to the other. He put it down, took a hollow sphere of opal. It was made in halves and seemed to be empty, but Falk could find no way to take it apart. He replaced it, and took a brown object shaped like a double crescent with a clear fracture plane running diagonally through it . . .

Half an hour later, he realized that he was not going to find any picture-books, or engineering manuals, or any one thing that would unlock the mystery of the Doorway people for him. If there were any knowledge to be gained

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here, it would have to come from the building as a whole.

The lizards distracted him. He could see them through the walls of the building, pressing their snouts against the glass, staring with little round eyes, gesturing at him.

The group finally broke up, leaving only one to guard the exit; the others dispersed. Falk saw one go into the building directly across the plaza. The door closed behind him. A little later another approached and pounded on the door; but it did not open until the first lizard came close to it inside. Some automatic mechanism, beyond Falk's fathoming, evidently responded to the presence or absence of any living thing inside each building. When the last person left, the door stayed open; when another person entered, it shut and would not open for the next unless the first person allowed it.

That added one item to the description of the Doorway people that Falk was building in his mind. They were not property-conscious, not afraid that thieves would enter in their absence, for the doors stood open when they were gone, but they evidently respected each other's love of privacy.

Falk had previously thought of this building as a vast factory, or laboratory, or dormitory—a place designed to serve a large number of people, anyhow. Now he revised his opinion. Each building, he thought, was the private domain of one person, or, if they had family groups, only two or three. But how could one person or one family use all this space, all these possessions?

He asked himself what a cliff-dweller would make of a millionaire's triplex apartment in New York. It helped, but not enough. The objects around him were all specialized tools; they would not function for him, and so told him nothing about the Doorway builders. There was nothing that he could compare to a bed, a table, a shower bath. He could not visualize the people who had lived here.

With an effort, he forced himself to stop thinking in terms of men. The facts were important, not his prejudices. And then what had been a barrier became a road. There were no beds, tables, showers? Then the Doorway people did not sleep; they did not eat; they did not bathe.

Probably, thought Falk, they did not die.

The riddle of the deserted chamber mocked him. How, having built this city, would they leave it? How would they spread the network of the Doorways across the face of the Galaxy, and then leave it unused?

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The first question answered itself. Looking at the littered chamber, Falk thought again of his comparison of the cliff-dweller and the millionaire. Not a millionaire's triplex, he told himself . . . a tent.

Once there had been something of particular interest on this world. No telling what it had been, for that had been millions of years ago, when Mars was a living world. But the Doorway people, a few of them, had come here to observe it. Finished, they had gone away, leaving their tents behind, as a man might abandon a crude shelter of sticks and leaves.

And the other things they had left behind them? The cubes, cones, rods, odd shapes, each one beyond price to a man? *Empty cans,* thought Falk, *toothpaste tubes, wrapping paper!*

THE sun was redder, nearer the horizon. Falk looked at the chronometer strapped to the wrist of his suit, and found to his surprise that it was more than five hours since he had left Wolfert on Mars.

He took food out of his pack and looked at the labels on the cans. But he was not hungry; he did not even feel tired.

He watched the lizards outside. They were scurrying around in the plaza now, bringing armloads of junk from the building, packing them into big red boxes. A curious construction floated into view down at the far end of the plaza. It was a kind of airboat, an open shell with two lizards riding in it, supported by two winglike extensions with streamlined, down-pointing shapes at their ends.

It drifted slowly until it hovered over the pile of boxes that the lizards had gathered. Then a hatch opened in its belly, and a hook emerged at the end of three cords. The lizards on the plaza began slinging loops of cord from their boxes to the hook.

Falk watched them idly. The hook began to rise, dragging the boxes after it, and at the last moment one of the lizards tossed another loop over it.

The new box was heavy; the hook stopped when it took up the slack, and the airboat dipped slightly. Then it rose again, and the hook rose, too, until the whole load was ten feet off the ground.

Abruptly, one of the three cords snapped. Falk saw it whip through the air, saw the load lurch ponderously to one side, and the airboat dip. The pilot instantly sent the boat down, to take up the strain on the remaining cords.

The lizards were scattering. The load struck heavily and, a moment later, so did the airboat.

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It bounced, skidded wildly and came to rest as the pilot shut off the power.

The lizards crowded around again, and the two in the boat climbed down for an interminable conference. Eventually they got aboard again. The boat rose a few feet while the lizards disengaged the hook. Then there was another conference. Falk could see that the doors of the boat's hatch were closed and had a crumpled look. Evidently they were jammed shut.

The boat finally came down once more, and with much argument and gesticulation the boxes were unpacked and some of their contents reloaded into two new boxes, these being hoisted with much effort into the cockpit. The rest was left strewn around the plaza.

The airboat lifted and went away, and most of the lizards followed it. One straggler came over for a last look at Falk. He peered and gestured through the wall for a while; then gave it up and followed the rest. The plaza was deserted.

Some time passed before Falk saw a pillar of white flame that lifted, with a glint of silver at its tip, somewhere beyond the city;

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and grew until it arched upward to the zenith, and dwindled, and vanished.

So the lizards had spaceships. They did not dare use the Doorways, either. Not fit . . . too much like men.

FALK went out into the plaza and stood while the freshening breeze ruffled his hair. The sun was dropping behind the mountains, and the whole sky had turned ruddy, like a great crimson cape streaming out of the west. Falk watched, reluctant to leave, until the colors faded through violet to gray, and the first stars came out.

It was a good world. A man could stay here, probably, and live his life out in comfort and ease. No doubt there were exotic fruits to be had from those trees. Certainly there was water. The climate was good. Falk thought sardonically that there could be no dangerous wild beasts, or those twittering tourists would never have come here.

If all a man wanted was a hiding place, there could be no better world than this. For a moment Falk was strongly tempted. He thought of the cold dead worlds he had seen, and wondered if he would ever find a place as fair as this again. Also, he knew now that if the Doorway builders still lived, they must long ago have drawn in their outposts. Perhaps they lived on only one planet, out of all the billions. Falk would almost surely die before he found it.

He looked at the rubble the lizards had left in the middle of the plaza. One box was still filled, but burst open; that was the one that had caused all the trouble. Around it was a child's litter of baubles—pretty glass toys, red, green, blue, yellow, white.

A lizard, abandoned here by his fellows, would no doubt be happy enough in the end.

With a sigh, Falk turned back to the building. The door opened before him, and he collected his belongings, fastened down his helmet, strapped on his knapsack again.

The sky was dark now. Falk paused to look up at the familiar sweep of the Milky Way. Then he switched on his helmet light and turned toward the waiting Doorway.

As the light fell across the burst box the lizards had left, Falk saw a hard edge of something thrusting out. It was not the glassy adamant of the Doorway builders; it looked like stone.

Falk stopped and tore the box aside.

He saw a slab of rock, roughly smoothed to the shape of a wedge. On its upper face characters were incised. They were in English.

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With blood pounding in his ears, Falk knelt by the stone and read what was written there.

THE DOORWAYS STOP THE AGING PROCESS. I WAS 32 WHEN I LEFT MARS, AM HARDLY OLDER NOW, THOUGH I HAVE BEEN TRAVELING FROM STAR TO STAR FOR A TIME THAT I BELIEVE CANNOT BE LESS THAN 20 YRS. BUT YOU MUST KEEP ON. I STOPPED HERE 2 YRS., FOUND MYSELF AGING. HAVE OBSERVED THAT MILKY WAY LOOKS NEARLY THE SAME FROM ALL PLANETS SO FAR VISITED. THIS CANNOT BE COINCIDENCE. BELIEVE DOORWAY TRAVEL IS RANDOM ONLY WITHIN CONCENTRIC BELTS OF STARS & THAT SOONER OR LATER YOU HIT DOORWAY WHICH GIVES ENTRY TO NEXT INNERMOST BELT. IF I AM RIGHT, FINAL DESTINATION IS CENTER OF GALAXY. I HOPE TO SEE YOU THERE.

JAMES E. TANNER
NATIVE OF EARTH

Falk stood up, blinded by the glory of the vision that grew in his mind. He thought he understood now why the Doorways were not selective, and why their makers no longer used them.

Once—a billion years ago, perhaps—they must have been uncontested owners of the Galaxy. But many of their worlds were small planets, like Mars, not large enough to keep their atmospheres and their water forever. Millions of years ago, they must have begun to fall back from these. And meanwhile, Falk thought, on the steaming worlds that now were cooling, the lesser breeds had arisen. The crawling, brawling things. The lizards. The men. Creatures not worthy of the stars.

So the way was made long, and the way was made hard; and the lesser breeds stayed on their planets. But for a man, or a lizard, who would give up all that he called "life" for knowledge, the way was open.

Falk turned off the beam of his head-lamp and looked up at the diamond mist of the Galaxy. Where would he be, a thousand years from today? Standing on that mote of light, or that?

Not dust, at any rate. Not dust, unmourned, unworthy. He would be a voyager with a destination, and perhaps half his journey would be done.

Wolfert would wait in vain for his return, but it would not matter; he was happy, if you called his existence happiness. And on Earth, the mountains would rise and fall long after the question of human survival had been forgotten. By that time, perhaps, Falk would be home.

—DAMON KNIGHT

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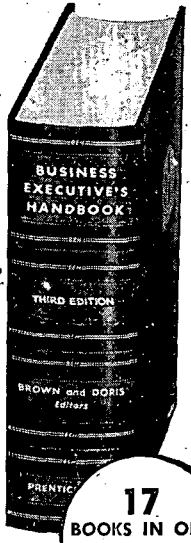

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